ROUTLEDGE INTERNATIONAL HANDBOOKS

The Routledge International Handbook of Sensory Ethnography

Edited by Phillip Vannini

"This is a pivotal volume that invites readers to immerse themselves in the bountiful landscape of sensory ethnography before offering a host of possibilities for its future development as a unique, and crucial, way of knowing about the lifeworlds we collectively inhabit. All ethnographers and qualitative researchers will gain immensely from dwelling within the pages of this beautifully crafted and thought-provoking book."

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"Readers should be warned that an avalanche of sensorial vibrations will travel through their veins as they dive into this stellar compilation, which places in conversation the 'giants' of sensory ethnography. Our contemporary world starves for caring and meaningful relations. Sensory ethnography responds to this need, and this volume tells us why."

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THE ROUTLEDGE INTERNATIONAL HANDBOOK OF SENSORY ETHNOGRAPHY

The Routledge International Handbook of Sensory Ethnography reviews and expands the field and scope of sensory ethnography by fostering new links among sensory, affective, more-than-human, non-representational, and multimodal sensory research traditions and composition styles. From writing and film to performance and sonic documentation, the handbook reimagines the boundaries of sensory ethnography and posits new possibilities for scholarship conducted through the senses and for the senses.

Sensory ethnography is a transdisciplinary research methodology focused on the significance of all the senses in perceiving, creating, and conveying meaning. Drawing from a wide variety of strategies that involve the senses as a means of inquiry, objects of study, and forms of expression, sensory ethnography has played a fundamental role in the contemporary evolution of ethnography writ large as a reflexive, embodied, situated, and multimodal form of scholarship. The handbook dwells on subjects like the genealogy of sensory ethnography, the implications of race in ethnographic inquiry, opening up ethnographic practice to simulate the future, using participatory sensory ethnography for disability studies, the untapped potential of digital touch, and much more.

This is the most definitive reference text available on the market and is intended for advanced undergraduates, graduate students, and researchers in anthropology, sociology, and the social sciences, and will serve as a state-of-the-art resource for sensory ethnographers worldwide.

Phillip Vannini is Professor in the School of Communication and Culture at Royal Roads University (Canada). He is the author/editor of 20 books, and from 2010 to 2020 he was the series editor for Routledge's Innovative Ethnographies Series. Phillip's documentary films have been distributed worldwide through television, in movie theaters, as well as through SVOD platforms such as Amazon Prime, iTunes, Google Play, Kanopy, and more.

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Edited by Phillip Vannini

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1

THE QUALITIES OF THE "NEW" SENSORY ETHNOGRAPHY

An introduction

Phillip Vannini

The need for sensory ethnography

Ethnography is one of the most widely known and universally practiced social scientific research strategies. Utilized across disciplines, and recognized outside of academia, it is taught to generation after generation of students in undergraduate and graduate programs around the world. Simply put, ethnography is an emic research practice focused on the ideographic description and understanding of ways of life and people's experiences, practices, feelings, and beliefs. Ethnographies can be very different from one another. Different research methods (e.g., participation, observation, one-on-one interviewing, and group interviews), different epistemological orientations (e.g., critical, phenomenological, constructivist, transformative, and decolonized), and different representational techniques (e.g., writing, film, photography, performance, sound archives, and drawing) make ethnographic practice diverse and constantly evolving. Sensory ethnography is one among many different ways of doing ethnography.

Sensory ethnography stems from Paul Stoller's formulation of a "sensuous scholarship," which was first articulated in *The Taste of Ethnographic Things* (1989) and later expanded in *Sensuous Scholarship* (1997). Stoller's call for a style of ethnographic work about the senses, through the senses, and for the senses later inspired Sarah Pink to write the first edition of *Doing Sensory Ethnography* (2009). Pink's book, in both its first (2009) and second editions (2015), can be legitimately considered the foundation of sensory ethnography as a research strategy. It not only outlines the field of sensory ethnography across disciplines and its evolution over time but also serves as a practical manual for anyone interested in learning the foundations of this increasingly popular methodology. The present book stands on the shoulders of these two "giants" and aims to further develop sensory ethnography in light of ongoing trends, turns, and debates across the social sciences. In addition, the present book—beginning with this introduction—intends to provide definitive answers on one of the key questions that have affected the delineation of sensory ethnography since its foundation: how exactly is sensory ethnography different from ethnography writ large?

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In one way or another, all ethnography is sensory. Well, in theory at least. Though all ethnographers are taught to cultivate the employment of their senses in the field, sensory ethnographers turn to the senses not as merely tools, but as ways of knowing and making sense of the world. Thus, sensory ethnographers conduct fieldwork by way of a process of enskillment called "education of attention" (e.g., see Csordas, 1993; Ingold, 2001). For example, as Dennis D. Waskul writes in this volume (Chapter 19), students are typically taught to do sensory ethnography by attuning to their senses and their sensations, something that Pink (2015) refers to as becoming sensory apprentices (see also Chapter 12, this volume). Waskul, for instance, teaches his students to become sensitive to the nuances of the experience of opening up a bag of potato chips. In doing so, he teaches them to take care in selecting carefully chosen words to describe the process to themselves and their readers.

As a student in graduate school, I practiced a related exercise. I remember walking across the street to the student union's cafeteria and writing in my field journal about everything I saw, heard, smelled, touched, and even tasted. As I did so, I realized that the task of describing in painstaking detail everything I perceived would have taken me thousands of words. It was there and then that I learned that ethnographic observation and description are a kind of sensory education (see Harris, 2020) that needs to navigate the nuances of language, the challenges of reflecting on one's bodily experiences, the troubling grounds of what we take for granted as members of culture, and how we relate to our people's sensations. Interestingly enough, the exercise was never presented to us as one in sensory ethnography, but in doing ethnographic research in general. This begs the question: if all ethnographic practice is a kind of sensory education, what makes sensory ethnographic practice more . . . sensory?

The question is fair. Indeed, like others (e.g., see Calvey, 2021; Nakamura, 2013; Ingold, 2011), I have often wondered about the identity, the definition, and the very raison d'être of sensory ethnography. In part this is because over the last 25 years, I have witnessed the explosion in the "marketing" of ethnography through a constant offer of new products, from collaborative ethnography, performance ethnography, critical ethnography, global ethnography, and so on. In this climate, it was easy to perceive sensory ethnography as simply just another "brand" and thus for many years I personally refused to label my own work "sensory ethnography."

There was something else about the sensory ethnography label which I did not appreciate at first. Paul Stoller's (1989, 1997) calls for a sensuous scholarship had deeply resonated with me. He had issued a compelling call to reawaken the scholarly senses dulled by years of sense-numbing dispassionate and impersonal research. His manifesto for a sensuous ethnography, for me at least, was not just another brand for the ethnographic market. It was *the* way to do justice to the ethnographic tradition, a tradition built on principles of storytelling, reflection, thick description, and above all, the tenet that good ethnography was all about showing—as vividly as possible—rather than telling (something one could do through theory without getting their pants dirty doing field research). If we already have sensuous ethnography, why did we need sensory ethnography too? I used to wonder.

In reality, we did, and we still do. While Stoller's *Sensuous scholarship* became a classic (it has now been cited over 1,500 times), Pink's *Doing sensory ethnography* became downright canonic (it has now been cited over 4,500 times), with the label "sensory ethnography" proving to be more widely appealing than its sensuous counterpart and significantly more

influential outside anthropology. So, while preparing this introduction, I asked Sarah Pink for her thoughts on this distinction, and in particular why she preferred "sensory" over "sensuous." She said:

> I tend to use direct terms and concepts that can translate across academic disciplines and across non-academic contexts and discussions, to bring together scholarship, practice and applied interventions. So, for me sensory was a useful category through which to achieve those ambitions. That's no criticism of Paul's use of sensuous, but rather a different context and audience.
>
> *(Pink, personal communication, 2023)*

Her vision was smart and accurate. Sensuous/sensory ethnography has now become one of the most popular styles of ethnographic research and one of the most useful tools to fend off the increasing threats that ethnography faces both within and outside the field. These threats have the potential of diluting what is most unique about ethnography as a way of knowing: its intimacy, its sensibility, its sensuality, and its evocative power.

Ethnography is growing and as a result it is changing. Ethnographers now spend less time in the field, they may do fieldwork remotely without ever leaving their office, they may rely on computer software to do their analysis, and may write up their reports in formal and anonymous styles that do not feel particularly dissimilar to the way some positivist scholars write. There are even new formulations calling for a "quantitative ethnography" (Shaffer, 2017). And more often than one can imagine—I say this as a regular reviewer of federal research grant applications—there are ethnographers who never set foot in the field, relying instead on research assistants to collect and transcribe all the data for them (so they can analyze with MAXQDA, NVivo, ATLAS.ti, Quirkos, Dedoose, Taguette, or MonkeyLearn; I am not making these names up).

Perhaps even more worrisome, like all of qualitative research in general, ethnography has become recently more conceptual, more analytical, and more theoretical. In a neoliberal economy in which universities gain capital value by way of research rankings, and in a research economy in which scholars accumulate career value by way of gathering citations, being "citable" matters. And we all know it is much easier to be citable when one coins a catchy concept rather than when one tells a powerful story. As ethnography becomes immeasurably thicker in theorization than description, the smell of bad sauce that Stoller (1989, 1997) decried begins to stink up the air once again. It is at times like these that sensory ethnography becomes indispensable. As Stoller writes in Chapter 14 of this volume, we live in an era in which we must attune ourselves to the necessity of "re-sensing the sensory" and this "requires storytelling that evokes space and place, hones in on the sonority of vibrant dialogue and depicts the idiosyncrasies of character. These creative moves result in works in which wisdom jumps from the author's page to the reader's mind." An innovative, creative, narrative sensory ethnography is "essential for renewed or expanded social sciences to . . . shape our futures" (Chapter 7, this volume).

Sensory ethnography is needed. It calls all ethnographers to engage in research that is strong in its stance against what I call zombie ethnography. Zombie ethnography is the kind of tasteless ethnography spat out by those who have swapped its key ingredients and its passionate preparation for artificially enhanced, genetically modified, mindlessly assembled, cookie-cut, and microwave-cooked flavors. Zombie ethnography is "qualitative" research

done as a hall of mirrors: a mere justification to engage in faceless, distant, impersonal theory "backed up" by data. Zombie ethnography is faceless research that completely sacrifices the depth and richness of experience for the sake of dry conceptualization. It is research that prioritizes abstraction over relationship-building with live beings. Zombie ethnography is above all research that tells instead of shows.

As Stoller asks in Chapter 14 in this volume:

> [I]s there not more scholarly space for *showing*—more evocation in artful storytelling? Through empirically informed sensuous storytelling, *showing* can be combined with *telling* to powerfully communicate important scholarly insights to the public. A more intense focus on writing-as-art can ensure that our slowly developed insights can become fundamental elements in the public sphere, elements that contribute directly to healing a world confronting a set of life-threatening social, cultural, ecological, and political crises.

Sensory ethnography can make a difference in combating zombie insensibility. However, sensory ethnography can only matter insofar as it continues to feel different, as it tastes like a lovingly prepared dish that cannot be mechanically and anonymously reproduced. It is in light of this, I feel, that sensory ethnography is distinct not only from zombie ethnography but from many other kinds of good ethnography. Sensory ethnography is unique, distinct, and necessary because, for better or for worse, so much of ethnography is actually not done through the senses, about the senses, and for the senses.

The key ingredients of sensory ethnography

Now that we know why we need it, we should reflect on what sensory ethnography is, precisely. For this, let us turn to Sarah Pink. In *Doing Sensory Ethnography*, Pink (2015) approaches ethnography from a genuinely ecumenical perspective. Rather than taking sides with certain theoretical perspectives or disciplinary traditions, or rather than emphasizing certain methods or even methodological characteristics over others, Pink (2015, p. 3) wisely uses the term "ethnography" to "refer to a range of qualitative research practices, employed, with varying levels of theoretical engagement, in academic and applied research contexts." She continues:

> Ethnographic practice tends to include participant observation, ethnographic interviewing and a range of other collaborative research techniques that are often developed and adapted in context and as appropriate to the needs and possibilities afforded by specific research projects. There is now no standard way of doing ethnography that is universally practised.
>
> *(2015, p. 3)*

She goes on to suggest that sensory ethnography "does not privilege any one type of data or research method. Rather, it is open to multiple ways of knowing and to the exploration of and reflection on new routes to knowledge" (Pink, 2015, p. 3). However, she is quick to note that sensory ethnography is not suited to producing

> objective or truthful account of reality, but should aim to offer versions of ethnographers' experiences of reality that are as loyal as possible to the context, the embodied,

> sensory and affective experiences, and the negotiations and intersubjectivities through which the knowledge was produced.
>
> *(Pink, 2015, p. 35)*

As the editor of this handbook, I could not agree more with this approach, and believe that all the chapters included here are based on such ecumenical understanding of the scope and intent of sensory ethnography. Moreover, like Pink, I firmly believe that sensory ethnography is not limited to any substantive agenda. While sensory ethnography is often practiced in the anthropology of the senses (e.g., Howes, 1991, 2003; Le Breton, 2017), the sociology of the senses (Gibson & vom Lehn, 2021; Vannini et al., 2013), or the transdisciplinary field of sensory studies (Bull et al., 2006; Howes, 2022, 2023), it is not limited to any one discipline, field, or topic. Whether sensory ethnography is practiced in the field of sensuous geography, the history of the senses, social interaction, interpersonal communication, artistic practice, film, social and cultural history, tourism studies, human–animal interaction, medical practice, design, consumer studies, architecture, material culture studies, the sociology or anthropology of the body, multimodal communication, or any other field or subfield, simply does *not* matter. Sensory ethnography is a research strategy that anyone can utilize, regardless of their substantive focus.

But if sensory ethnography is so diverse in terms of approaches, so accepting of various styles, so open to different methods of data collection, so transdisciplinary, and so deeply rooted in the very core foundations and assumptions of ethnographic ways of knowing and practice writ large, what is distinctive about it? To settle this question once and for all, I wish to return for a moment to what earlier I have cheekily called "zombie ethnography"—and in general to what one might call zombie qualitative research. According to popular culture and folklore, a zombie is a being that is neither alive nor dead, but something in between. Usually a reawakened corpse, a zombie is strong, insensitive, and ravenously hungry. In fact, typically a zombie's only mission is to feed. After being bitten by a zombie, a person typically turns into a zombie.

Along these lines, zombie ethnography is research that is neither positivistic and quantitative nor interpretive and qualitative, but somehow both at the same time. Zombie ethnography is inspired by ethnography and the qualitative tradition but bitten by the powerful jaws of realism. As a result, it is research that loses its soul, becoming passive, uninspired, dispassionate, impersonal, and uncaring. Unable to empathize with live beings, its main goals are to accumulate data for the sake of accumulating data, to produce bias-free "results," and to use de-sensitized analyses and writing that feels like it was produced by no one in particular. Its only mission is to satiate the hunger of zombie thesis supervisors, zombie journal editors, and zombie tenure committees who do not care about the actual taste of what they are eating.

In contrast, sensory ethnography is alive. Sensory ethnographers are alive to the richness and the nuances of the lifeworlds in which they live. They are sensitive to the needs of the communities of which they are permanent or temporary members. They are susceptible to the pain and anger, joy and relief, commitment and hope of the people they strive to relate to. They are alert to the sensations that keep their bodies open to the world, on and off the field. They are unafraid to reflect on their feelings, moods, visceral impulses, and carnal desires. They are invested in the pursuit of creative and critical insight as a way of alerting their audiences to injustice, as a way of inspiring them to think and feel differently, and as a way of reimagining how the world could be. Above all, sensory ethnographers are resolutely

committed to apprehend the vibrancy of the matter that makes our existence meaningful and to communicate about such matters in the most vivid and compelling ways possible. A sensory ethnography done through the senses, about the senses, and for the senses is a way of knowing and sharing knowledge that is above everything else awake, conscious, animate, and spirited: the complete opposite of its zombie counterpart.

Unwilling to provide a systematic definition of sensory ethnography, because such definitions always tend to be prescriptive and ultimately exclusionary, in this introduction I have resolved instead to identify *qualities* that are typical of sensory ethnography. In what follows, I have listed 15. Drawn from this handbook's chapters, and obviously from the broader practice of sensory ethnography, these 15 qualities are not all necessarily exclusive to sensory ethnography. Taken as a whole, however, I believe they serve as a fitting description of what sets sensory ethnographers apart. And while I do not mean to suggest that every sensory ethnography is characterized by all these 15 qualities, I do believe that most sensory ethnographies display at least a few of these qualities explicitly, and few more implicitly. As I describe in what follows, sensory ethnography is reflexive, embodied, relational, more-than-human, affective, multisensory, situated, critical, emplaced, narrative, sensuous, multimodal, more-than-representational, atmospheric, and imaginative. For the sake of organization, I divide these qualities in three groups, focusing on how they inform the practice of an ethnography that is done through the senses, about the senses, and for the senses.

Through the senses

Sensory ethnography is done *through* the senses. This means that researchers need to think of themselves as "apprentices" (see Pink, 2015; Chapter 12, this volume) who are learning to sense and make sense of the lifeworlds they are investigating. A sensory apprentice must understand that the world in which they are immersed does not give itself openly, free of mediation, to one's perception. Therefore, for a sensory apprentice, there is no such thing as "data." Data, the plural of datum, is a Latin word that means "given." But nothing is simply "given" to a sensory apprentice. To speak of data as if the world were truly and simply "given" is to view elements of the lifeworld as a set of objective stimuli that the human sensory apparatus merely registers. Apprentices, instead, typically work *with* materials and learn along the way (see Ingold, 2013). They learn the affordances of materials, their compositions, their feels, their qualities, and their behaviors. Above all apprentices learn to make sense of what they can do with materials, and they do so only after they have understood how different materials relate to one another, and how they themselves relate to materials. There is nothing "given" about this process.

In light of the active roles they take in becoming sensory apprentices, sensory ethnographers must above all be *reflexive*. Reflexivity (for more, see Davies, 2007) is the first (and arguably the most fundamental) of the 15 qualities of sensory ethnography that I wish to highlight. As Drysdale and Wong (2019, pp. 3–4; see also Cox et al., 2016) note:

> [R]eflexivity may be the core of the entire sensory ethnographic process. Sensory ethnography is often characterised by a shift away from solely observing participants and towards using researchers' own experience and bodily sensation to gain insight into the lived relationship between people, practices, and places. This recognition is perhaps the major point of difference between traditional ethnography and sensory

> ethnography—whereas the former could be understood as a mix of participation and observation, the latter produces collaborative multisensorial and emplaced ways of knowing as part of the overall ethnographic encounter. In acknowledging the shifting dimensions of sensory experience, sensory cultures and researchers' expression of them are intertwined. This critical reflexivity extends to the epistemological aspects of research: a reflexive discussion of sensory ethnographic practice that renders the processes of knowledge production open and transparent.

For John Hockey and Jacquelyn Allen-Collinson (Chapter 8, this volume), reflexivity is "vital." Understood as "the recognition that the researcher herself/himself cannot be detached from the research setting, or entirely independent of the research process, but rather is fundamentally part of these" (Chapter 8, this volume), reflexivity forces researchers to come to terms with the inevitability of their influence on the lifeworlds they investigate, and that world's influence on them. Unlike positivist researchers, but also realist ethnographers who might be naive enough to think they are able to assume a neutral and detached perspective, reflexive sensory ethnographers fully understand how their socialization forms their subjectivity and their sensorium. "Engagement with reflexivity," write Hockey and Allen-Collinson (Chapter 8, this volume), "means we need to be aware of our positionality." This entails recognizing how our values, ideas, assumptions, interpretations, perspectives, and worldviews are always with us, and therefore our ways of making sense of the world are never value-free. Being reflexive, therefore, requires that we strive to maintain a "critical perspective and analytic distance on our own situatedness in the research" (Chapter 8, this volume).

Sensory ethnography is also *embodied*. This might seem intuitive—after all, how can one be disembodied, dispossessed of one's own body? Yet, disembodied research, even disembodied ethnography is not uncommon. In contrast, at the very least, embodied ethnography requires presence. Presence might seem like an obvious condition of research, but it is not. More and more researchers undertake research studies that allow them to depend on others, or tools, to do all the (field)work on their behalf. As faculty are kept increasingly busy with administrative demands, bureaucracy, and meetings, relying on human or non-human others (like big data banks) is growingly appealing. Yet, there are no substitutes for being present in the field. And beyond mere presence, embodiment refers to a self-consciousness of one's presence in the field, a bodily presence marked by gender, race, sexuality, age, bodily skills, and physical abilities (for more, see Hammer, 2019; Tantia, 2020). It is through the awareness of this physical presence, and the physical presence of others, that the sensory ethnographer learns to sense and make sense of the lifeworld. As Stoller (1997) has noted, ethnography is a corporeal process which involves the ethnographer in the physical and sensory experiences of oneself and others. Present, embodied ethnographers thus often learn by being led and guided by their research participants to places and through experiences that they would not have otherwise encountered on their own, and if they had not been present (Stevenson, 2017).

Embodied research is hard work and embodied researchers are not afraid of sweat or sore limbs. Some of them, like Hockey and Allen-Collinson (Chapter 8, this volume) and Larsen (Chapter 16, this volume), love sweat and sore limbs so much that they are dedicated runners. Jonas Larsen, for example, is interested in understanding the role of marathons in tourism promotion, and in doing so he doesn't just *Zoom* in for a few interviews with runners, he actually runs marathons. In Chapter 16, Larsen teaches us how an embodied sociology of

the lived and moving body entails a corporeal approach to knowledge acquisition. This is an approach that instructs runners how to feel: how to listen to one's bodies, how to make sense of the countless bodily sensations of running, how to pace oneself, how to respond to terrain undulations, how to regulate speed, how to read one's stopwatch, how to ignore (or be very attentive to) pain and soreness. An embodied sensory ethnography—of running or just about anything else—thus demands that the researcher be attuned to the relation between the "external" senses (sight, smell, taste, hearing, and touch) and the internal ones (nociception, proprioception, chronoception, thermoception, and equilibrioception) and the relation between one's own sensations and other people's. And this, ideally, ought to reveal the ways in which the human body is simultaneously biological, material, and social.

What we humans sense and how we make sense of our sensations is a relational process and achievement, and so is sensory ethnography. To say that sensory ethnography is *relational* is to acknowledge the depth of the ties that bind people's sensory activities together as well as the depth of the ties that bind ethnographers and their interlocutors in making sense of the world together (see Brill de Ramírez, 2015). Take, for example, Chapters 13 and 35, both focusing on hearing-impaired people and the relational experience of deafness. As Irving writes (Chapter 35, this volume):

> [P]eople's sensory lifeworlds are shaped by the radical contingency of the body one is born with, the land of one's birth and the economic status of one's parents. Put another way, the life someone lives, including their sensory experiences and embodied understandings of vision, sound, taste, touch, and other senses such as proprioception, emerges within a specific social, political, and material form of life.

A form of life is a collective of practices and interactions that shape one's being, knowledge, cognition, language, expression, and the senses. A life is a relational process that situates someone in history, society, culture, and in language yet without generating (sensory) experiences that are experienced, enacted, or understood in the same way across individuals. In light of this, sensory ethnographers relate to people as both members of a community with whom they share a particular sensorium and also as individuals with distinct particularities and contingencies marked by their precise relationships to their surrounding social world. Therefore, Irving points out how "a sensory ethnography of specific bodies in movement and action—rather than presupposing shared social and cultural experience—emphasizes variation and draws attention to how diverse bodily potentials are differently constituted" (Chapter 35, this volume).

Deafness is typically portrayed as an absence or lack—as the inability to hear (for a parallel argument on blindness, see Hammer, 2019). But Irving—following Friedner and Kuster's (2020) incitation to transcend this simplistic portrayal of deafness—frames the experiences of deaf students not in relation to the broader society but rather in relation to their own community's experiences, which allows us to understand and appreciate "the sensorial and phenomenological lifeworlds of being deaf not through a lack and absence of sound but as an embodied site of sensorial richness and completeness" (Chapter 35, this volume). The same relational quality is present in Friedner's research on cochlear implants (Chapter 13, this volume). Like Irving, Friedner examines the sense of hearing as politically, economically, and relationally produced and distributed. But hearing and hearing aid technologies are also "produced through relations with other people, the state, medicine and re/habilitation professionals and institutions, and multinational corporations, among other actors" (Chapter 13,

this volume). Methodologically, this requires an approach to the study of the experiences of deaf people that is embedded in the very relations that shape their sensory socialization. Friedner thus finds herself interacting with families, educators, health caregivers, state agents, surgeons, audiologists, and speech and language therapists, and other stakeholders as a way of understanding hearing as a relational outcome. But sensory ethnography is relational in another way too, notes Friedner, in that ethnographers are not alone—despite the stereotypical portrayal of the lone anthropologist entering a distant field full of strangers.

If sensory ethnographers are apprentices, then they are always embedded in pedagogical relations where teaching and learning are happening at the same time, and never as solitary activities. Sensory ethnography is therefore relational in the sense that sense-making activities are often collaborative and participatory (see Chapter 11, this volume). As sensory ethnographers, it is common to feel that we are learning about a lifeworld together with our research interlocutors in light of the relationships we have developed over time with them. But the relational quality of our inquiry is not something we share with humans only.

Increasingly, sensory ethnography is a *more-than-human* practice. The more-than-human turn, registered in ethnography through an increasing attention to multispecies ethnography, pushes researchers to focus beyond text and language through interspecies communication process that challenge conventional forms of scholarship and Western ontologies and epistemologies (e.g., see Hamilton & Taylor, 2017). The strongest call to sensory ethnographers to engage in more-than-human issues can be found in the 2020 publication of a special issue of *The Australian Journal of Anthropology* on "A sensory approach for multispecies anthropology." In the compelling introduction to the special issue, Fijn and Kavesh (2020) prompt sensory ethnographers to study how human lives are always entangled with non-human lives in a kind of relational becoming that blurs the artificial boundary between nature and culture. And this, they write, is a reciprocal process which forms a multispecies relatedness.

Taking their lead from writers like Kohn (2013) and Tsing (2015), Fijn and Kavesh (2020, Chapter 20, this volume) lead sensory ethnographers to investigate an anthropology of life which is focused on kinship and entanglements, an anthropology of hybrid communities that goes beyond the scope of the humanist project by viewing animacy as inevitably relational (see Ingold, 2013). This is a kind of scholarship that recognizes non-human agency, transcends the bounds of anthropocentrism, abandons the view of nature as singular, and "integrates the more-than-human in understanding social, ecological and political processes" (Fijn & Kavesh, 2020, p. 7; see also Kirksey & Helmreich, 2010; van Dooren et al., 2016). As various contributors to this volume show—Fijn and Kavesh, Wright, Peterson, Fiore, Lupton et al., Paterson, and Markuksela—multispecies sensory ethnography unfolds as a an ecologically sensitive and post-humanist research that is "attuned to life's emergence within a shifting assemblage of agentive beings" (Ogden et al., 2013, p. 6).

About the senses

As I mentioned earlier, sensory ethnography is "about" the senses, but this does not mean that every sensory ethnography should be focused on advancing sensory studies, the sociology or anthropology of the senses, or any substantive field of research which focuses directly on the senses. Learning about the roles that the senses and sensations play in the constitution of the lifeworld simply means producing sensory ethnographies that are *situated* in sensory subjectivity (thus gendered, racialized, sexualized, enskilled, etc.), and that are critical, emplaced, affective, and multisensory. In short, regardless of its topic and goals, sensory

ethnographies always need to take into account how our individual and embodiment and presence in the field—as both researchers and research participants—is always a distinctly sensory one.

As Charette and Elliott remind us in Chapter 28, our lived experience of the body "is not a physiological machine, whose cognitive states are determined by specific sensations—it is my body, or your body". This phenomenological body emerges from being-in-the-world. Skiers might then be able to detect textures of snow and ice and reflect on the bodily comportment those textures demand in a way that non-skiers are unable to. Sommeliers are able to identify wine's properties in ways that less-trained wine drinkers are not. These sensory dispositions are essential to the formation of selfhood (Vannini et al., 2013). As Charette and Elliott describe, when ways of sensing change due to brain injuries, for example, one's self also undergoes change. When we say that sensory ethnography is *situated*, we acknowledge that subjectivity does not exist in a vacuum dictated by universal neurological conditions. Rather, our understanding of subjectivity writ large—and therefore our subjectivity as ethnographers—must take into account the immense diversity of experience and the distinct ways sensing shapes selfhood, society, and culture.

A situated sensory ethnography is also an inclusive one. According to Alper (2018, p. 3561):

> [I]nclusive sensory ethnography intervenes in ethnographic practice by addressing diversity in how both researchers and research participants process and interpret sensory information, the layered interconnections between the various senses, and the full range of potential multisensory encounters to be had with media and technology in daily life.

Situatedness leads to inclusivity because it recognizes the complexity of sensory differences across individuals, across species, and even across individual members of the same non-human species. Such recognition should then lead to the acceptance of neurological diversity and ultimately to both an ontological and epistemological openness to different ways of learning both through and about the senses, a pluriverse of sensibilities (see Clément et al., 2022; Hammer, 2019).

A situated sensory ethnography is by necessity an *emplaced* one. The idea of an emplaced sensory ethnography can be traced back, among others, to Howes (2005; see also Feld, 2005), who argued for a paradigm of emplacement based on the relationship between embodied mind and environment. The notion of an emplaced sensory ethnography was further articulated by Pink (2015, p. 28), who suggested that an emplaced ethnography "attends to the question of experience by accounting for the relationships between bodies, minds, and the materiality and sensoriality of the environment." Like situatedness, the quality of emplacement refers to the spatialities shaping the experiences of both ethnographers and their interlocutors.

In Chapter 4, Sekimoto and Brown argue that "how one finds themselves in a spatial and temporal environment is a multisensorial experience that undergirds their phenomenology of bodies, place, and social worlds." Emplacement is then an inevitable condition of racialization. But for the racialized body, emplacement is often experienced as a kind of displacement, a feeling of being out of place in the "white world." It is an experience of hypervigilance over one's body and one's presence, and an experience of uncertainty and anxiety in relation to one's surroundings. As I write these words in January 2023, the news media have

just released the video of the murder of Tyre Nichols, a young black man brutally assaulted by a mob of Memphis police officers and left for dead by them and their EMT colleagues. Though this time the police were African American, Tyre Nichols's murder follows a string of similar incidents perpetrated by white police officers across the United States, something that many black Americans have come to experience as a constant threat to their safety every time they get behind the wheel of their car and get pulled over the police. Cases like this highlight the interconnectedness of emplacement, embodiment, and racialization. In the words of Yancy (2012, p. 45), quoted in Sekimoto and Brown (Chapter 4, this volume):

> To be white in a white world . . . is to be extended by that world's contours. The world opens up, reveals itself as a place called home, a place of privileges and immunities, a space for achievement, success, freedom of movement [whereas] to be black in "the white world" is to turn back towards itself, to become an object, which means not only not being extended by the contours of the world, but being diminished as an effect of the bodily extensions of others.

An emplaced sensory ethnography is attentive to the ways racialized embodiment and emplacement are embedded into people's experiences of and practices in space and place. Sekimoto and Brown argue that an emplaced ethnography needs to take into account how sensing and sensible bodies are always enmeshed in a relation with "the historicity of the particular relations of sensing in a given encounter" (Chapter 4, this volume). Going beyond the traditional domain of visibility, Sekimoto and Brown remind us that the emplaced body is a multisensory subject. Drawing particular attention to the kinetic domain, they alert us to understand emplacement as a capacity (but also a subject to various limitations restricting that capacity) to move in coordination with other bodies and the affordances present in an environment. And that movement, in all its specificity and in the ways in which it is enabled and constrained by power relations, is something that sensory ethnographers must continuously be reflexive about (see Pink, 2015).

Given the way sensory embodiment is shaped by unequal power relations, sensory ethnography is often a *critical* form of inquiry. Like all other forms of critical ethnography (e.g., see Madison, 2011), sensory ethnography is often explicitly committed to a progressive and democratic social and political agenda and it is resolutely devoted to drawing attention to the countless ways in which the sensorium is complicit in the reproduction of gender, racial, sexual, and other inequalities. In this book alone, the critical quality of sensory ethnography is evident in contexts such as immigration and urban politics (Chapter 23 by Fiore), the reproduction of disability (Chapter 13 by Friedner), gentrification (Chapter 9 by Moretti), consumer culture (Chapter 6 by Gottschalk), racialization (Chapter 4 by Sekimoto and Brown), and erasure from collective memory (Chapter 29 by Yoshimizu), just to mention a few. It is therefore no accident that a growing volume of sensory ethnographies are produced through a critical or even transformative paradigm focused on collaboration and equal participation (see Chapter 11, this volume).

Though many of the 15 qualities I describe in this introduction are not particularly novel and have in fact been a trademark of sensory ethnography since its early days, other qualities are newer as they are responsive adaptations of sensory ethnography to trends and shifts endemic to post-millennium-turn social sciences. Two of these qualities pertain to affect and the multisensory body. Let us begin with affect and with what one might call *affective* sensory ethnography. In affective ethnography, affect is a resource for the conduction of

ethnographic practice and representation, a resource felt and then reenacted through the researcher's embodiment and presence in the ethnographic text and performance (Gherardi, 2018; Lamrani, 2019). Simply put, an affective sensory ethnography is not an ethnography that is about affect but rather an ethnography that is itself affective: emotionally vivid, visceral, and redolent of feelings, moods, dispositions, and precognitive energies. Informed by the affective turn in the social sciences, an affective ethnography is both the outcome of affective dynamics which have left a mark on the ethnographer and his/her interlocutors and a generative and transformative force with a capacity of its own to affect its audiences.

Gherardi (2019, p. 742) defines affective ethnography as "a style of performative ethnographic process that relies on the researcher's capacity to affect and be affected in order to produce interpretations that may transform the things that they interpret." In my view, such transformative capacity takes place in two ways. First, affective sensory ethnography does not preoccupy itself with finding definitive answers to research questions or arriving at conclusions that reduce complex social realities to comprehensive explanations. Rather, affective and non-representational sensory ethnography produces works that allow readers (or viewers, listeners) to reimagine the social world through a multitude of possibilities. Instead of going after "what is"—and therefore ontological answers—affective sensory ethnographies go after "what could be" and "what else could be" (see Chapter 30, this volume). By doing so affective ethnographers move their audiences to interpretive theoretical possibilities, generating potentials, and stimulating lively transformative energies to *do* something (rather than just know something). Second, affective sensory ethnographies are composed (i.e., written, filmed, and performed) to make people feel something. These affective sensory ethnographies are profoundly sensual and moving, and strategically attentive to the pathos from which they derive their transformative power. Examples of these kinds of ethnographies can be found in Chapters 14, 15, and 18.

The turn to affect across the social sciences has generated a great deal of interest in atmospheres. An atmosphere is an ambiance, a collective and yet precognitive feel or mood of a particular place at a particular point in time as experienced by those who are present there (see Sumartojo & Pink, 2020). Contemporary sensory ethnographers have become particularly invested in the study of atmospheres in two principal ways: in terms of the experience of its participants and in terms of their design (though as we will see shortly, these two ends of the spectrum are always understood and investigated in relation to one another). But regardless of the atmospheric subject which a particular study is about, sensory ethnography itself has developed a certain *atmospheric* quality and orientation. In Chapters 10 and 17, Lynch and Bille, respectively, provide us with two different examples of this quality.

Chapter 17 takes us to places like spas and casinos—commercial environments whose atmospheres have been strategically designed with the intent to sell a particular consumer experience. It is here that we ethnographically encounter the ephemerality of a distinct sensory experience. Sensory ethnography, by way of embodied presence, approaches the study of atmospheres through descriptions that are "particular, intimate, fleeting, impressionistic, and partial" (Chapter 17, this volume). Unlike other approaches to atmospheres which are more static, more ambitious in their attempt to explain away atmospheres as more permanent conditions, atmospheric sensory ethnographies are briefly suspended in webs of relations that spin sensible ephemera. In Lynch's words: "even spaces that are positively saturated with sensory design (like the casino, or the spa) cannot design out the contingent nature of sensory–spatial relations" (Chapter 17, this volume).

To apprehend these relations, even in part, sensory ethnographers sometimes rely on interviews with atmospheres' participants—a method that sets them apart from other students of affective atmospheres. But these are not "typical" interviews (if there is such a thing). As Bille writes in Chapter 10, sensory interviews too take on uniquely atmospheric qualities. Atmospheres after all may be clearly felt by people, but remain notoriously difficult to describe and make sense of through words. These challenges compel ethnographers to find alternative ways to "observe, describe, analyze and theorize atmospheres beyond the words of research participants" (Chapter 10, this volume). Atmospheric sensory ethnographies then become cautious about both the apparent clarity and vagueness of interviewees' articulations. The key to this atmospheric quality of sensory ethnography, Bille writes, lies in showing

> how the distinction between semantic and metaphysical vagueness offers a pragmatic approach to what participants say, which acknowledges the importance of cautiousness towards both fixating an ephemeral experience as well as the certainty of participants' articulations of the nature of the world.
>
> *(Chapter 10, this volume)*

In so doing, an atmospheric sensory ethnography becomes less self-certain, less stable, less definite, but infinitely more attentive to its own precarity and ephemerality.

At its onset, sensory ethnography was characterized by a single-sensory approach. A study might focus on smell, for example, or on touch, or taste, and so on. Largely, this was a reaction to (but also a continuation of) the modus operandi of visual ethnography. While there is nothing wrong with a single-sensory approach, a growing number of contemporary sensory ethnographies are moving toward a multisensory approach (see Howes, 2019; Pink, 2015). *Multisensory* ethnography does not single out certain senses or sensations but examines them instead in relation to one another. This allows ethnographers to understand how senses and sensations inform one another, how discourses and representations belonging to one sensory realm shape other sensory realms, and how distinct sensory practices unfold as ecologies of sensation rather than as atomistic acts. Multisensory ethnographies are also reconceptualizing sensory politics by reimagining how sensory dynamics particular to one sense can be approached from the perspective of other senses, such as the case of "non-ocular vistas" recently examined by Jackson et al. (2021) in the context of the Peckham skyline.

The turn toward a multisensory ethnography is largely an epistemological one. Thus, rather than studying and understanding sensations as arising from one sensory domain only, a multisensory ethnographer is open to the ways in which sensing is a way of taking part, of sharing, in the broad domain of the sensible. As Laplantine (2015, p. 2) puts it: "The experience of fieldwork is an experience of sharing in the sensible [*le partage du sensible*]. We observe, we listen, we speak with others, we partake of their cuisine, we try to feel along with them what they experience." Howes (2019) has framed this approach as a new way of doing fieldwork, a departure from the classic method of doing participant observation and indeed a new practice of participant sensation, a way of sensing and making sense along with others through an actively social—rather than merely physiological—process (p. 18). One would be tempted to say, following Howes's suggestion, that instead of interlocutors (i.e., people we speak with) or informants (i.e., people who give out information), sensory ethnographers should refer to research participants as co-sentients. Perhaps one day!

In part, ethnographers are also becoming more sensitive to the need of adopting multisensory approaches due to the diffusion of technologies and consumer objects that trouble the traditional boundaries among the senses and promise to create experiences—both functional and aesthetic—that are increasingly vivid, immersive, and encompassing of multiple sensory domains. Chapters 5, 6, and 12 address some of these cases. Attention to the multisensory is also opening up new avenues of professional inquiry for sensory ethnographers, such as design. In Chapter 7, Pink, for example, examines the role of sensory design in opening possible futures, arguing that a new mode of doing scholarship and engagement can engage in and influence the ways futures are conceptualized, planned, enacted, and experienced.

For the senses

When Paul Stoller (1997) wrote *Sensuous Scholarship*, the power of storytelling was clear in his mind. Poorly told tales from the field were something he likened to the lingering taste of bad sauce. *Narrative* ethnographies instead, Stoller argued, had a captivating power over audiences, a power that moved people by virtue of their intimacy, their humanity, and ultimately, their intrinsic value as stories with a beginning, a middle, and an end. As Stoller reminds us in Chapter 14, the narrative quality of sensory ethnography, makes people want to keep turning pages. By showing rather than just telling, sensory ethnographies invite us as guests into distant worlds whose sensations are both different and familiar, thanks to rich descriptions that are artfully conveyed through careful prose. Though sensory ethnographies are sometimes narrative, there still are not enough narrative sensory ethnographies around. This requires a greater attention to the need to "re-sense the sensory." As Stoller puts it in Chapter 14:

> [R]e-sensing the sensory requires storytelling that evokes space and place, hones in on the sonority of vibrant dialogue and depicts the idiosyncrasies of character. These creative moves result in works in which wisdom jumps from the author's page to the reader's mind.

What Stoller calls "writing-as-art" has the power to make readers (as well as viewers, listeners, etc.) feel what other people, and ethnographers themselves, feel. Narrative sensory ethnographies are no longer just sensory (as in relating to the senses and sensations) but *sensual* (as in gratifying the senses by way of exciting, troubling, stimulating, or otherwise affecting sensations). Sensory affective ethnography seeks to enliven sensations rather than interpreting them (see Chapter 30, this volume). This kind of ethnography draws from the power of story to, not so much "transport" a reader to a faithfully captured lifeworld, but rather to animate a new lifeworld where ethnographic audiences can both imagine and reimagine the possibilities of existence (see also Elliott & Culhane, 2016). The sensuous quality of these ethnographies often requires that many of the conventions of scholarly writing are destabilized. Gone are the typical organizational schemes (i.e., introduction, background, methods, analysis, conclusion), gone is the need for neatly assembled paragraphs that are wrapped around a single topic and key citations, gone is the habit of packaging quotes into indented blocks, gone is the forceful presence of ubiquitous citations, and so on.

Whereas the sensual and narrative qualities of sensory ethnography are not new to the last decade of sensory ethnographic research, I wish to highlight three final qualities. Inventive, multimodal, and non- or more-than-representational ethnographies were novelties when

Pink wrote the first edition of *Doing Sensory Ethnography* (2009), and still had not fully come into their own when the second edition was published in 2015. Let us begin with the *non-* or *more-than-representational* quality, as it is arguably the key to understanding the remaining two. Non-representational or more-than-representational research can take multiple forms, some of which can be too complex to explain in a few lines. But, in a nutshell, non- or more-than-representational research is a kind of scholarship cognizant of the failings of representation and the impossibility of capturing the depths and nuances of experience (Vannini, 2015a). Non-representational theory and research therefore attempt to "cope" with these failings by animating (rather than reporting) the complexities of our more-than-textual, more-than-human, and multisensory world (Lorimer, 2005, p. 83). Coping often takes place through experimentations, in both writing and other modes of communication, that are intended to simultaneously enliven and unsettle, often with the goal of pushing their audiences to reimagine something (rather than explain it or understand it).

Unlike most research, which is indicative and therefore concerned with "what is," non- and more-than-representational research is subjunctive and therefore concerned with "what if" (Vannini, 2015b). Take, for example, Chapter 29 by Ayaka Yoshimizu. Because there are no memorials to the lives and deaths of Japanese sex workers who lived in the trans-pacific world from the second half of the nineteenth century through early twentieth century, Yoshimizu finds herself performing "unmemorials, memorial objects or sites that are meant to commemorate lost lives or past events but whose intentions are undone or undermined due to the absence of the memorial objects, commemorators, or narratives that enable commemoration" (Chapter 29, this volume). The more-than-representational value of this approach lies in the fact that Yoshimizu treats her sensory ethnography as "performative" rather than "informative." In other words, rather than being concerned with what there is, with what informs her as a "detached researcher of the past from which to reconstruct a possible account of the distant past," she performatively interacts with what could be in order "to create an occasion for embodied knowledge to be generated about and in the present" (Chapter 29, this volume).

The *imaginative* quality of sensory ethnography is based on its more-than-representational basis. Rather than being concerned with prediction, an imaginative approach builds off trust and hope, and in "anticipation of what might be going to happen next" (Pink, 2021, p. 193). In Pink's words:

> While earlier urges toward reflexivity have focused on the past, applying the same reflexive gaze to our imagined and sensed futures is a methodological step toward connecting to other people's ways of sensing what might happen next. To be able to intervene in the world, in collaboration with others, we need to attend to what these interventions might feel like and to the ways that the circumstances that might emerge from them will feel.

Unlike research concerned with explaining what is and what has been, imaginative sensory ethnography is interventional and driven by methodologies focused on understanding what else something could be, and what will be, and therefore with the unknown, the imagined, and the possible (e.g., see Elliott & Culhane, 2016; Chapter 30, this volume).

Imagination is often understood as fabrication, but as Ingold (2022) has recently argued, imagining is a form of world-making. To imagine is to take part in active processes of a world in formation, thus "corresponding" with the emergent properties of the lives of the world's

human and non-human inhabitants. "What if," Ingold asks in Chapter 26, "in order to get to the root of our *experience* of sound," we have to set aside the binary understanding of a sound as something that "can only be either 'in the world' or 'in the mind,' either physical or psychic?" "What if," Ingold asks, "it were neither one nor the other?" Imagination is at the root of creation, but it is also at the basis of much experimentation. The kind of experimentation, for example, that goes on as people deliberately attempt to enter unfamiliar environments as part of leisure pursuits (see Chapter 27, this volume). But it is also the kind of experimentation that goes on when research itself becomes artfully creative in order to make certain experiences come to life (see Elliott & Culhane, 2016).

It is no accident that non-representational and imaginative research is thus generative rather than merely descriptive, creative rather than merely definitive. And in many cases, this kind of research is also ***multimodal***, that is, communicative through a multitude of modes beyond the classical written word (e.g., see Cox et al., 2016). In this volume alone, sensory ethnography is conducted through performance, film, photography, community events, decks of cards, exhibitions, sound archives, and more. Multimodal sensory ethnography is, of course, not new. As Pink (2015) has noted before, multimodal communication is an ideal strategy to convey sensory ethnographic information, and the history of anthropology and other social sciences is rife with examples of scholarship intended to be heard, seen, and touched, rather than just be read. But what is increasingly novel about contemporary multimodal sensory ethnography is its creative elan, its impetus to do something new rather than just mimic something else.

Thus, in this volume, multimodal sensory ethnography breaks loose the ontological, epistemological, and above all axiological boundaries between science and art. In some cases, it does so through an attentive examination of the technological affordances of representational tools like video cameras (see Chapter 32); in other cases, it does so by through the yet-unexplored possibilities afforded by artificial intelligence (see Chapter 21), and in other cases still it does so by way of involving local communities through arts-based inquiry fueled by cultural critique and social and political emancipation (see chapters by Uzwiak and Rhys-Taylor). As Jewitt and Mackley have written elsewhere, the idea is not simply to augment the old potential of sensory ethnography by going beyond the limits of written word, but instead to respond

> to the methodological challenge of how to understand this changing social landscape. A challenge underpinned by a growing "restlessness or dissatisfaction" amongst qualitative researchers with the failure of dominant social science methods to adequately account for the visual, the sensory and the digital, an increasing awareness that body experiences cannot be reduced to talk, and the need for embodied methods to help gain insight on the social significance of bodily and sensory experience.
>
> *(Jewitt & Mackley, 2019, p. 92)*

The book's outline

As the editor of this handbook, I made a conscientious effort to neither instruct nor prescribe volume contributors to organize or format the content of their chapters in any specific way. Handbooks are often highly structured reference books which derive their value from both a quest for comprehensive coverage and consistent style across chapters. But that approach, to me, seemed anathema to the principles of (sensory) ethnography. So, rather than map out

the field, identify chapters, and then seek out contributors to write about the topics identified by the editor, I (mostly) asked contributors to write about whatever they wanted and then grouped such chapters together. This "inductive" approach to chapter and topic selection has resulted in a book that does not pretend to be comprehensive but rather in a book that is invariably reflexive. In fact—again drawing inspiration from the ethnographic tradition—I asked contributors to reflexively share the lessons they themselves have learned from the conduction of their work. As a result, rather than feeling like extensive literature reviews, all chapters feel like reflections based in personal experiences and fieldwork.

I have divided the 36 chapters into six parts. Part 1 situates contemporary sensory ethnography and its agenda into its past, present, and future. Chapters in Part 1 trace the lineage of sensory ethnography and its evolution over time (Chapters 2 and 3), examine the new challenges that sensory ethnographers face in light of new technologies and cultural practices (Chapters 5 and 6), highlight the critical potential of sensory ethnography and the need for political commitment (Chapters 4), and outline the future possibilities that are opening up for the field and its practitioners (Chapter 7).

Part 2 examines some of the more common methods and strategies followed by sensory ethnographers, focusing in particular on the challenges that doing sensory ethnography presents. Contributions cover reflexivity and autoethnography (Chapter 8), participant observation (Chapter 9), interviews (Chapter 10), collaboration (Chapter 11), multi-sensoriality and technology (Chapter 12), as well as relationality (Chapter 13). One of the unique characteristics of this handbook is the diversity of topics it covers, and Part 2 of the book is clear evidence of this, with subjects ranging from running (Chapter 8), gentrification (Chapter 9), light and atmosphere (Chapter 10), disability and mobility (Chapter 11), industrial design (Chapter 12), and deafness and technology (Chapter 13).

Part 3 of the book gathers chapters that emphasize the sensuous, affective, and atmospheric qualities of sensory ethnography. Two chapters (Chapters 15 and 18) in this part of the handbook are explicitly driven by the value of sensuality and in order to do so, they eschew theoretical and methodological self-exegesis. They both transport us to corners of America that do not typically capture headlines, lifeworlds in which Stewart and Peterson attune themselves to fragments of practices and experiences understood as singularities, ephemeral atmospheres, and ordinary affects. In this part of the book, we also learn about the power of narrative to inform sensuous scholarship (Chapter 14), about sensuous geographies in the context of running and walking (Chapter 16) and in the context of sensory design of consumer spaces (Chapter 17). In Chapter 19, Waskul reflects instead on the rhetorical qualities and compositional strategies employed by sensory ethnographers.

Part 4 of the handbook is dedicated to more-than-human sensory ethnography. The more-than-human domain is incredibly diverse, ranging from fish and the realm of fishing (Chapter 22), artificial intelligence and the digitality of the cloud (Chapter 21), urban waste and litter (Chapter 23), mountains and their sensescapes (Chapter 24), and timber sculptures (Chapter 25). The scope of more-than-human sensory ethnography is brilliantly introduced in Chapter 20, which begins with engagement with animals and goes on to describe the field of more-than-human sensory ethnography in its key characteristics and unique agendas.

Part 5 of the handbook is dedicated to non-representational issues. Chapter 26 by Tim Ingold forces us to come to terms with the simplicity of ordinary thought about sound and challenges us to think about it in non-binary terms. Ingold takes us along on a unique sound walk throughout which we are prompted to reimagine what we hear and how we hear it. In typical non-representational style, in Chapter 27, Edensor asks us to reimagine the potentials

of unfamiliar sensory experiences, in a way continuing along the path opened by Ingold. Chapters 28 and 29 ask us to reflect on the limits of the word and the failures of selfhood and memory, respectively, in the context of brain injury and memorialization (and the lack thereof). Chapter 30 makes a case for the importance of imagining for real and outlines a few practical lessons in terms of creation, attention, and correspondence. Chapter 31 provides us with a set of useful reflections on non-representational thinking at work in the context of doing sensory ethnography in queer spaces.

The last part of this volume, Part 6, gathers together a variety of reflections on the multimodal power and potentials of sensory ethnography. Chapters touch on film and video (Chapters 32 and 37), sound (Chapter 33), community-based inquiry (Chapters 34 and 36), and photography (Chapter 35). Topics range from skateboarding (Chapter 32), nature and place (Chapter 37), sound archives (Chapter 33), and community (Chapter 34) to food (Chapter 36) and sensory education (Chapter 35). The book is then brilliantly concluded by Anna Harris's insightful and thought-provoking epilogue (Chapter 38).

As an editor, I am aware that there are limitations—indeed utter distortions—inherent in *writing* about multimodal scholarship rather than showing it through the modes it is intended to be communicated in, and therefore I have striven to utilize the web to do what the book cannot. Several of the chapters in Part 6 of the book, but other parts as well, are accompanied by visual and audio material hosted by Concordia University and David Howes's Sensory Design team at www.sensorydesign.ca.

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PART 1

Sensory ethnography

Pasts, presents, and futures

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2

THE RISE OF SENSE-BASED SOCIAL INQUIRY

A genealogy of sensory ethnography

David Howes

In "Sociology of the Senses," the German sociologist Georg Simmel observed: "That we become involved in interactions at all depends on the fact that we have a sensory effect upon one another" (Simmel 1907; first English translation 1921; 1997: 107). This observation is at the heart of sensory ethnography. Yet Simmel's essay lay fallow for much of the twentieth century, at least in English-speaking academia. It had to await the sensory turn in the humanities and social sciences—most notably, in history and anthropology—of the early 1990s to be reprised and elaborated into a general theory of the social life of the senses (Classen, 1997, 2001; Vannini et al., 2012; Howes, 2022) and concomitant methodology—namely, sense-based social inquiry.

This delay may be attributed to the hegemony that the discipline of psychology has long exercised over the study of the senses and sensation, exacerbated by the rise of cognitive neuroscience in the mid-twentieth century. The neuroscientific revolution resulted in the withdrawal of attention from the interface between sense organ and world and substitution of a focus on the neural pathways which lead from the "transducers" (i.e., receptor cells in the eye, ear, and nose) to their terminus in the visual cortex, auditory cortex, rhinencephalon (or "smell brain"), and so forth. Perception came to be conceptualized exclusively in terms of "patterns of brain activity" (Howes, 2022, pp. 73–75), and that is what it means to "be you" according to the "new science of consciousness" (Seth, 2021).

"Sensuous scholarship" (Stoller, 1997) opposes the neurological reductionism or "neuromania" (Tallis, 2011) of cognitive psychology. It leads with the senses as opposed to neurology, sentience as opposed to cognition or "consciousness," and sensory and social interaction as opposed to the individuation/privatization of the senses—as of the individual—typical of mainstream Western psychology (Howes, 2023, ch. 4). "Sentience takes us outside of ourselves," writes Michael Taussig (1993, p. 38) in his "particular history of the senses" entitled *Mimesis and Alterity*. The emergent focus on "the sensible" directly challenges the assumption that perception (read: meaning- or sense-making) goes on "in some secret grotto in the head" (Geertz, 2000, p. 76). It is a *public*, social activity, Clifford Geertz asserts (see further Classen, 1997; Howes & Classen, 2014; Santos, 2018, ch. 8; Guru & Sarukkai, 2019, ch. 3).

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The sensory turn crystalized around the concept of the sensorium as defined by the media theorist Walter J. Ong. "By sensorium," Ong (1991, p. 28) writes, "we mean the entire sensory apparatus as an operational complex," and "differences in cultures . . . can be thought of as differences in the sensorium, the organization of which is in part determined by culture while at the same time it makes culture." Thus, perception (including self-perception) is not just down to the brain, it is also up to our culture.

Sensory ethnography is the methodology of choice for the study of sensory difference and interaction. It departs from the conventional anthropological method of participant observation by engaging all the senses and introducing a focus on immersion or "participant sensation" in place of the externality of "the observer's gaze." François Laplantine (2015, p. 2) aptly sums up the gist of this approach: "The experience of [ethnographic] fieldwork is an experience of sharing in the sensible [*le partage du sensible*]. We observe, we listen, we speak with others, we partake of their cuisine, we try to feel along with them what they experience." On this account, the senses figure as both object of study and means of inquiry. Sensory ethnography involves a cultural approach to the study of the sensorium and a sensory approach to the study of culture. To practice sensory ethnography is

> to accept sensuousness, to lend one's body to the world and accept its complexities, tastes, structures, and smells. . . . [S]ensuous scholarship is ultimately a mixing of head and heart. It is an opening of one's being to the world—a welcome.
>
> *(Stoller, 1997, pp. xvii–xviii; see further Uzwiak & Bowles, 2021)*

At its onset in the early 1990s, in addition to upsetting neuropsychology, sensory ethnography took leave from the extreme emphasis on textuality or "the poetics of ethnography" instigated by the "writing culture" movement of the 1980s (Clifford & Marcus, 1986). The latter paradigm reduced the practice of fieldwork to "a process of textualization." Anthropology had long been "a discipline of words" (as typified by the ethnographic monograph), but in the wake of the 1980s textual revolution, words or "discourse" came to occupy the *whole* field of ethnography: "the proper referent of any [ethnographic] account is not a represented 'world'; now it is specific instances of discourse" (Clifford, 1986, p. 14).

Lucien Castaing-Taylor was in the vanguard of the contestation of the textual juggernaut. In "Iconophobia," he called out the "linguification" of meaning and concomitant denigration of film in mainstream anthropology, extolled the "apparent affinity of film with life itself," and argued that "ethnography can itself be conducted filmically" (Castaing-Taylor, 1996, pp. 86–87). True to his word, Castaing-Taylor went on to found the Sensory Ethnography Lab at Harvard University in 2006, and has produced a number of highly sensational documentary films, such as *Leviathan* (with Véréna Paravel), which exposes the brutality of the North Atlantic fishing industry. Significantly, *Leviathan* has no voice-over. It is wordless, just as viewing it can leave an audience speechless

While Castaing-Taylor and fellow proponents of screen-based or "filmic" sensory ethnography (Grimshaw, 2001; MacDougall, 2005) championed the visualization of ethnography, other leading practitioners, such as the ethnomusicologist Steven Feld ([1982] 2012), promoted sonification or "acoustemology" (Feld & Boudreault-Fournier, 2021); the anthropologist of food, David Sutton (2010), introduced "gustemology" or eating-tasting as "a way of knowing"; and the dance anthropologist Tomie Hahn (2007) directed attention to the body in motion in her ethnographic study of learning Japanese dance. Meanwhile,

sporting anthropologists stepped into the ring with their informants: in *Learning Capoeira* (2005), Greg Downey propounded a theory of "corpophysics" and the pugilist Loïc Wacquant (2005, 2006) called for a "carnal sociology." For my part, I appropriated the term "osmology" (the study of odors, their production, and their effects) to evoke the practice of sniffing out the social (Classen et al., 1994, pp. 116–119; Howes, 2003, pp. 146–149, 193–195, 200–203).

In *Doing Sensory Ethnography* (2009), Sarah Pink helpfully codified these diverse sense-based forms of ethnographic inquiry. Her manual in turn paved the way for the radical *sensualization* of anthropological theory and practice on display in *A Different Kind of Ethnography* (Elliott & Culhane, 2017). In their introduction to this manual, the editors avert the reader that the ensuing chapters offer a range of

> participatory exercises that invite you to write in multiple genres, to pay attention to embodied multisensory experience, to create images with pencil and paper and with camera, to make music, and to engage in storytelling and performance as you conceptualize, design, conduct, and communicate ethnographic research.
>
> *(Elliott & Culhane, 2017, p. 3; see further Collins et al., 2017)*

Sensuous scholarship has not been without its detractors. For example, in *The Perception of the Environment* (2000), Tim Ingold critiqued the work of Stoller, Classen, and others (including the present writer) for mounting a "case against vision" and treating the senses severally. Taking his cue from the philosopher Merleau-Ponty's (1962) idea of the "synergic system" of the body and "prereflective unity" of the senses, he argued that "the eyes and ears should not be understood as separate keyboards for the registration of sensation but as organs of the body as a whole, in whose movement, within an environment, the activity of perception consists" (Ingold, 2000, p. 268).

In point of fact, it was disingenuous of Ingold to characterize sensory anthropology as anti-ocularcentric (even though it is critical of Western visualism), since its point, from the outset, has been "to summon all the senses" (Howes, 1991): it abjures all dichotomies (including ocularcentric–antiocularcentric, mind–body, etc.) and shifts the onus to the investigation of the relations *among* the senses and their respective deliverances. The sensorium is "relationally produced" (Dawkins & Loftus, 2013): each culture must, therefore, be approached on its own sensory terms, and it is essential to guard against essentialisms, such as the notion of sight as the most objective of the senses, taste as the most subjective, hearing as the most emotional, or smell as the most memorable, as psychologists are wont to maintain.

It is also a matter of first importance to attend to the political life of the senses and sensation. As Constance Classen (1997, p. 402) states, it is according to the "sensory meanings and values [which] form the *sensory model* espoused by a society" that the members of that society "make sense" of the world: "There will likely be challenges to this model from within the society, persons and groups who differ on certain sensory values [and practices], yet this model will provide the basic perceptual paradigm to be followed or resisted."

The sensory ethnographer does not, therefore, treat the individual as "an undivided centre of movement and awareness" the way Ingold (2011, p. 41) does, but rather as a product of the *intersection* of the division of society along class, ethnic or racialized, and gender lines. The sensible is not distributed evenly. For example, as regards race, the color line divides people by reference to skin pigmentation (Sekimoto & Brown, 2020; Stoever, 2016). As

regards class, upper-class people tend to be more visible and audible than lower-class people (i.e., "the masses"); laborers are reduced to "hands" or stigmatized as being "smelly"; and, members of the upper class are supposed to exhibit refinement in their tastes, such as a preference for *haute cuisine*, whereas the working class are represented as having "coarse" tastes, such as a predilection for "heavy, greasy" fare (Bourdieu, 1987). All of these distinctions go missing from Ingold's ideology of the unified self.

Gender divisions are also informed by—and in turn support—the division of the senses. In the West, historically, one finds men being associated with the so-called higher senses of sight and hearing (including speaking in public) while women were identified with the "lower" senses of tactility (the female touch), smell (the perfumed sex), and taste (cooking) (Classen, 1998). In a variation on this hierarchization of the senses and sexes, among the Kwoma of East Sepik Province, Papua New Guinea, women weave netbags, pound sago (to produce flour), and cook whereas men hunt, create visual representations of the spirits (painted sculptures, reams of bark paintings), and also control the means of auditory communication with the spirit world, such as bamboo flutes and bullroarers (Howes, 2003, chs. 5, 6).

It is often only by chance that the ethnographer notices and becomes attuned to the differential elaboration and interplay of the senses across and within cultures. Stoller records an incident where a Songhay *sorko* (healer) chastised him for failing to discern the sound that a sick patient's errant soul made when the healer liberated it from a pile of chaff. The *sorko* observed:

> You look but you do not see. You touch, but you do not feel. You listen but you do not hear. Without sight or touch . . . one can learn a great deal. But you must learn how to *hear* or you will learn little about our ways.
>
> *(Stoller, 1989, p. 115)*

Another incident involved Stoller being served a thin, bad-tasting sauce called *fukko hoy* by a disgruntled member of his host's household; but the "bad sauce" made for "good ethnography" since it sensitized the ethnographer to Songhay gustatory codes (i.e., messaging by means of flavors and textures).

Robert Desjarlais is the author of one of the finest descriptions of ecstatic or extrasensory perception on record. This is given in his first-person account of the experience of spirit possession in *Body and Emotion* (1992). During his fieldwork among the Yolmo wa people of the Nepal Himalayas, Desjarlais apprenticed himself to a healer (*bomoh*), who used trance to diagnose the cause of his patients' illnesses. Trance is a technique of ecstasy or "way of sensing" (Howes & Classen, 2014; de Witte, 2013) that surpasses the ordinary bounds of sense. Desjarlais does not pretend to have mastered trance, only to have shared in this state, thanks to immersing himself in and attuning himself to everyday Yolmo wa ways of comporting themselves—ways of "moving, talking, interacting," all of which were quite novel to him; he also strove to incorporate the "local view of the body as a collection of marionettelike parts" (Desjarlais, 1992, p. 18). Doing so enabled the "shaking" (that is a sure sign of "hosting the gods") to "come on more powerfully" (ibid.). At first his guru dismissed his reports of the visions he experienced as "irrelevant," but that changed with time, as his technique improved. Still, Desjarlais cautions:

> [M]y trances did not involve a template that recorded, like a photograph, what Yolmo shamans experience of trance. Instead, my memories of the trances should be taken as

> a sensory transcript of a conversation between cultures, with my experiences marking the crossover between American and Himalayan ways of being (17).

In the course of my ethnographic research together with Constance Classen on medicine and the five senses in Tucumán, Argentina, in the early 1990s, we would accompany local healers on their forays into the hills to collect medicinal herbs. Constance and I were struck by the way the curanderas and curanderos would identify plants not by inspecting their visual appearance (e.g., the shape of their leaves) but by plucking and crushing them to release their smell. The concoctions they fashioned from the herbs would be consumed in the form of smoke (incense), or teas, or simply worn on the person. The power of these potions was held to reside in their smell. My favorite herb was *muña-muña* (Quechua for "love-love"). My least favorite was rue, for its assault on my nostrils. Rue shrubs are commonly grown adjacent to the front door of a dwelling, to ward off noxious influences. Their flowers are bright yellow, and therefore highly decorative, but it is for their pungent aroma that they are valued. In the West, there are countless illustrated treatises of botany, all descended from the work of the Swedish botanist Carl Linnaeus. These manuals would be of little or no use to the folk healers of Tucumán; by contrast, a book like *Scent: A Natural History of Fragrance* (Pearlstine, 2022) would prove most useful, were it not for the fact that the healers' knowledge does not derive from books anyway, but from a vibrant oral tradition and ongoing empirical experimentation.

Other forays in the sensory anthropology of medicine include Judith Farquhar's (2002) account of the theory and practice of "flavor causation" in traditional Chinese herbal medicine (see further Farquhar (2020) on sensory techniques of diagnosis), Marina Roseman's (1992) evocation of the "healing sounds" of Temiar medicine, and the special issue of *Transcultural Psychiatry* on "The medical anthropology of sensations" (Hinton et al., 2008)

As appears from the foregoing discussion, research in medical anthropology has been a major tributary to the advancement of sensory ethnography, and *vice versa*. It might be thought that sensory ethnography is well suited to the study of ethnomedical traditions, but not Western biomedicine, given the latter's emphasis on "evidence-based" practice. Biomedicine is "evidence-based" in the sense of being reliant on the technologization and concomitant objectification of perception by means of X-rays, magnetic resonance imaging (MRI) scans, and/or chemical analysis of blood or urine and other samples. It abjures folklore and old wives' tales. Furthermore, there is hardly a more sensorially sterile place than the modern Western hospital. The hospital is geared to rational efficiency in the delivery of medical services, and if anything is celebrated for anaesthesis (the patient in surgery sensing nothing).

But this representation of biomedicine is misleading. Patients nevertheless feel discomfited by "the hospital smell" (Stenslund, 2016), jarred by the cacophony of all the sounds given off by the monitors, jaded by the tastelessness of the food (however nutritious it may be), and non-plussed by the drab attire (the so-called hospital gown). Conversely, what could be more colorful and dazzling than the computed tomographic (CT) scan of a brain, with its "magnetic appeal" (Dumit, 2004; Joyce, 2008)? Sensory ethnographers like Stenslund and Dumit, and numerous others, have been in the vanguard of exposing the residual life of the senses within the confines of biomedicine, in the field of both diagnosis (Harris, 2016, 2021) and treatment (Barcan, 2011). Their critique of the sensory regime of biomedicine has also contributed indirectly to the growing recognition of the importance of attending to

the patient's *sensory* well-being and promoting *sensuous* healing. This recuperation of "the sensible" is reflected in the (re)valorization of therapeutic touch, the (re)introduction of hospital gardens, and the (re)design of hospital rooms to create a cozy, home-like (as opposed to clinical) atmosphere. These developments are something researchers attached to the "Explorations in sensory design" research project at Concordia University have been investigating alongside our inquiries into the sensory ambiance of other public sites, such as the mall and the museum (see https://www.sensorydesign.ca/).

To pick up on the site of the museum, the sensory turn in museology (Howes, 2014), and material culture studies generally, has resulted in an intense new focus on the "atmosphere" of the museum (Schmitt, 2018) and the sensory as well as cultural biographies of the artifacts in a collection (Howes, 2022a, ch. 6). Formerly, once an artifact had been accessioned (photographed catalogued, labeled), it would be housed in a glass case, positioned as an element in an ethnographic tableau, or relegated to the storeroom. This treatment occluded the fact that, in its culture of origin, the artifact's meaning would have resided, not in its visual form alone, but in its use in vibrant contexts of sensory and social interaction (Edwards et al., 2006). Furthermore, many of the "things" now domiciled in the museum were hailed as sentient beings, or as kin, in their source communities (Matthews, 2016), and ministered to accordingly (Howes, 2023, ch. 2).

Increasingly, curators—that is, politically and sensorially savvy curators—have become attuned to this contradiction and sought to develop alternative curatorial and display strategies, such as the "Sacred Materials Program" at the Canadian Museum of History. The latter museum has a fine collection of Iroquois False Face masks. Twice yearly, medicine men from the Six Nations Confederacy are invited to come to the museum and chant and smudge (with sage smoke) and feed the masks (with corn meal mush). Other initiatives include the community outreach educational program attached to the "African Worlds" exhibition at the Horniman Museum in London, which offered African subjects living in diaspora the opportunity to connect with the tangible and intangible heritage of their forebearers (Golding, 2010; see also Gadoua, 2014).

Other museum curators and educators have sought to engage the senses of the general public in novel ways. Wing Yan Vivian Ting (2010) describes a community outreach program called "Creative Spaces" that she ran at the Schiller Gallery of the Bristol City Museum in 2006–2007. The participants were all students learning literacy or teaching English as a second language (ESOL) at two local colleges. The aim of the project was to facilitate a "robust and reflective object–human relationship" with items (mainly bowls) in the museum's collection of Chinese porcelain by empowering the participants "to listen to the sensual, tactile language of Chinese ceramics" (Ting, 2010, p. 189). One sensory activity involved the students handling the bowls while wearing blindfolds to sensitize them to the tactile qualities of the ceramics, and then comparing these with their visual impressions when the blindfolds were removed. Another involved the participants looking at a ceramic piece while listening to a piece of music, such as the third movement of Bach's Harpsichord Concerto in D major. The titles of the pieces were withheld so as not to distract attention from the transcendent and engaging qualities of the music (music being the most abstract, intangible form of art) and incite the participants to "explore the inner value of ceramic wares" through the formation of "perceptual syntheses" (197).

In effect, the "Creative Spaces" project enabled the participants to "see" feelingly, musically, personally, and creatively by engaging the *whole* sensorium in the work of art interpretation, playing one sense off against another, and conjoining the senses in fun and unexpected

ways. The associations the participants forged (e.g., between a big wine jar and "a pregnant woman with a softly swelling belly") could be described as "metaphorical" following Lakoff and Johnson (1980), but it would be more accurate to regard them as perceptual through and through (i.e., as perceptual rather than conceptual syntheses). The activities Ting proposed are best understood as exercises in *intersensoriality* designed to feed the aesthetic imagination, infuse the perceptual with the personal, and make the object–human relationship much more meaningful and hence fulfilling. In place of the emphasis on disinterested contemplation in the conventional definition of the aesthetic experience (following Kant), Ting's experiments are all about participant sensation—or recanting Kant, as it were**.** This form of sensory ethnography could be called "museal sensory ethnography" to distinguish it from the "filmic sensory ethnography" of Castaing-Taylor and company. It is a testimony to the power of multimodal sense-based social inquiry, as advocated in *A Different Kind of Ethnography* (Elliott & Culhane, 2017; see further Cox et al., 2016; Howes, 2022, ch. 8; Salter, 2015).

Medicine and material culture (including museology) are just two of the domains in which the upsurge of sense-based ethnographic inquiry has been revolutionizing scholarship and reshaping policy. Other domains include advertising and marketing (Malefyt, 2007, 2017; Howes & Classen, 2014, ch. 5), politics (Lamrani, 2021; Santos, 2018), and—especially promising—multispecies ethnography (Fijn & Kavesh, 2021). What began with Stoller's *The Taste of Ethnographic Things* (1989), and the incident involving the sauce called *fukko hoy*, has transformed into a five plus course *feast for the senses.* I hope this chapter will have whet the reader's appetite for yet more sensuous scholarship. As the philosopher Michel Serres once remarked: "If a revolt [in scholarship] is to come, it will have to come from the five senses!" (cited in Howes, 2022, p. 3).

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3

ETHNOGRAPHY AND THE SOUNDS OF EVERYDAY LIFE

Michael Bull

Prelude

I started attending football matches at the age of 12; adult neighbors would take me to the match and back by car. My home team was Southampton Football Club. I always stood in the same place with my neighbors, below the clock at the north side of the ground. I would take my portable radio with me, with its earpiece which fitted into one ear, and listen at half time for the scores of other matches which I would then relay to my companions as we drank coffee and ate our sandwiches. Football grounds in the 1960s had rudimentary sound systems, unlike today, intermittently giving information about how to leave the ground and so on. Most sound came from the voices of rival supporters, singing in support of their respective team, normally with good humor. The spectacle of attending a match was multisensorial, with supporters often packed together collectively, swaying in unison at the thought of a goal scored, desperate to see. At around the same period, I joined 32 million other people in the UK in order to watch the live broadcast on BBC television of England beating Germany 4–2 in the World Cup football final as part of my own imagined community, vividly remembered even today. Just three years earlier, I had watched and listened intently to the news of the assassination of President Kennedy. The BBC television schedule was halted by brief and solemn news bulletins interspersed with the playing of funeral music—the predictability of life interrupted—remembered.

I also possessed a portable record player, purchased from my wages delivering newspapers at weekends. I would place it on the carpet of my bedroom, normally when my parents weren't at home as they disliked "pop" music, and play my latest vinyl records. The first LP that I bought was the Beatles' *Rubber Soul*. My musical taste was not catered for by BBC *Radio*, whose music appeared to come from a different age. At weekends, I would take my portable radio to bed with me at night, pull the covers over my head, put the earpiece into my left ear and listen to music more to my taste on *Radio Caroline*, a pirate radio station operating from 1964 from an offshore ship, the *Mu Mi Amigo*, whose signal I was able to pick up on the South Coast of Britain. These sonic experiences and interests were not reflected upon at the time as part of a cultural and historical narrative that I was a part of—they just *were*.

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Twenty-five years later, I had stopped going to football matches and no longer listened to music through headphones. Instead, I was spending far too much time listening to jazz at Ronnie *Scott's Club* in Soho late into the night. I thought of myself as an urban sociologist with an abiding interest in the relationship between the technologies that we habitually use and their relation our sense of the social. I had never used a Walkman and my interest was only tweaked by a contingent isolated observation in the late 1980s while on holiday in Greece. Walking along a largely deserted beach, I came upon a solitary young man sitting down appearing to watch the waves lapping against the shore. On his head a pair of headphones; in his hands a Walkman. I walked past, a silent fleeting presence in one sound world, while he inhabited his own alternative soundscape "elsewhere."

The above account illustrates one strand of sonic consumerism of the twentieth century. The watching and listening concurrently with 32 million others who experienced the World Cup final of 1966 represented until recently the dominant Fordist mode of consumption with much daily experience consuming the same material at the same time. Then there was my listening under the bed clothes to the dulcet tones of Radio *Caroline* and my visits to *Ronnie Scott's Jazz Club* representing the post-Fordist model of consumption, whereby selective tastes are increasingly desired and catered for. Then there is my Walkman user, inhabiting his own unique, albeit mediated, sound world—what I refer to as the hyper-post-Fordist moment of consumer culture. These three modes of being operate in unison, jockeying for dominance under different guises, camouflages, and technologies.

Sonic absences in social and cultural thought before 2000

I began researching the meaning and nature of Walkman use in 1992, 13 years after it had been introduced into popular culture. At the time, there had been no research into how people used them, merely a few brief anecdotal accounts. The easiest methodological choice for me was one to use of qualitative interviews. My 80 interviewees derived from a series of snowball samples so as to capture a wide range of ages, occupations, and ethnicities among users. I would ask users to bring their Walkman with them to the interview and would break the ice by asking how they had used their Walkman that day. I knew my subculture theory, my theories of everyday life, my urban theory from Simmel (1997) to Sennett (1990), and Goffman (1969) with his work on the presentation of the self, which remained in vogue. There was an issue as to how I could combine my left-leaning self into merging these perspectives within a dialectical framework but apart from that I had considered that I was in the theoretical "light" in terms of the research project, whereas I found that I was actually in the "dark" theoretically. My theoretical framework proved unable to explain what I was hearing from my respondents. I hadn't sufficiently reflected upon the dominant visual origin and nature of the epistemology that I was using unaware that I had been using. The sonic adventure thus began.

At that time there was both a theoretical and empirical deficiency in urban and cultural studies when it came to sound, technology, and the everyday movements of people through urban spaces. Postmodernism, for example, was announcing the coming and celebration of the decentered subject, whereas my research showed that it was precisely the desire for feelings of centeredness that was prominent in many Walkman accounts (Seidman, 1992). Equally, urban theorists were obsessed with nineteenth- and early twentieth-century concepts in order to explain the movements of people through the city. Urban subjects were often understood as modern-day flâneurs, a category that Walter Benjamin, who discussed

the practice in nineteenth-century culture, had already consigned the concept to the dustbin in the 1930s (Benjamin, 1997). Flânerie is a description of the alienated urban subject imaging what it must be like to be the "other" in their search for difference and permanence. My Walkman users tended to reverse this formulation, aesthetically recreating the "other" through their own subjective orientations as an urban form of mimesis.

If urban theorists engaged with a more sensorily orientated city, they frequently fell back on Simmel's early twentieth-century formulations of the city inhabitant maintaining a sense of equilibrium through a retreat from the sensory overstimulation of crowded spaces, thus establishing the model of city centers as a metaphor for all urban living. Most urban theorists, however, largely interpreted the urban visually through the work of de-Certeau (1988), Debord (1977), and Lefebvre (1991). Media Studies was little better by locating media use primarily within the living room, reading the meanings of that which was consumed semiotically as if the sound was turned down. Alternatively, they collapsed any tension between subject and object through theories of "active audiences" in which consumers ironically become armchair imperialists, a problem recognized as early as 1947 with the publication of Adorno and Horkheimer's *Dialectic of enlightenment* (1973). Urban theory and media studies rarely met, and sound rarely figured in any of their analyses.

> This led me to argue that *Sounding out the city* demonstrated the way . . . in which personal stereos become a critical tool for users in their management of space and time, in their construction of boundaries around the self, and as a site of fantasy and memory. In doing so I propose to formulate a new moral geography of the city that places the management of contingency and the production of forms of interpersonal asymmetry at the center of the account. . . . Sound, the audible, is thus put back onto the cognitive map of urban experience; sound as opposed to vision becomes the site for the critical investigation of urban life.
>
> *(Bull, 2000, p. 2)*

It would be incorrect to claim that sound was altogether invisible within the academy at the time. While Sound Studies as we understand it today did not exist at the time, there was the acoustic ecology movement largely deriving from the work of Canadian composer Murray Schafer and his colleagues at Simon Fraser University and founder of The *World Soundscape Project*. Schafer's work was profoundly anti-urban in its dismissal of most forms of urban sound as "noise" to be eradicated (Schafer, 1977). The movement was also tied to an avant-garde epistemology of sound and music which involved a Husserlian "bracketing out" of the social context of listening in order to listen purely and simply. The role of composers John Cage (1994) and Pierre Schaeffer (2013), both of whom were concerned with the revolutionizing nature of listening, arrived with a set of intellectual and methodological assumptions about the nature of listening that had deep implications for the study of the role of sound as a form of social practice.

More generally, acoustic ecology's favored method of achieving an understanding of environmental sound was the sound walk. As Brian Kane perceptibly observed, "the acousmatic experience of sound allows the listener to attend to the sounds itself, apart from the causes, sources and connections it might have to the environment" (Kane, 2014, p. 5) While contemporary varieties of sound walking are to some extent more socially situated (see Bull & Cobussen, 2021), traditionally they were not, as evidenced by British sound artist Paul Elliman who in 2009 took a group of sound scholars through the nocturnal streets of New

York in order to listen to the city's sirens: police, fire, and ambulance (Bull, 2020). The participants were armed with the New York codes for the use of a variety of siren sounds to be used depending on the situation. The aim of the event was to listen to and understand siren sounds, the assumption being that sirens "represent an apparently unambiguous massage of stress, alarm, or danger within the city." The group of sound scholars were well educated, young, and predominantly white. The group unfortunately heard few sirens on their walk. They were informed that they had gone to the "wrong" area of New York. Those areas with higher crime rates, they were reliably informed, such as the South Bronx or Brownville, had more siren sounds. The image—it is recorded on film—of sound scholars walking around the "wrong" area of New York in order to understand the nature and meaning of urban sirens is troubling on many levels, as indeed is going to the "correct" areas of a city in an attempt to describe siren sounds. It represents sonic voyeurism masked as investigation. It also illustrates that a phenomenology of listening needs to take into account the social, political, historical, and economic nature of those sounds listened to together with a critical reflection on the nature of those who are engaged in listening (Bull, 2018). The sounds of police sirens in any industrial city might evoke feelings of security, salvation, or fear depending upon who you are, your social class, gender, or ethnicity.

My own framework was based upon the view that speech and sound are mediated, they do not speak for themselves, but require interpretation. The aim of every analysis is to contextualize experience through theories that explain how it is articulated or observed. Interpretation guides that which is spoken, Interpretation is not transparent. The relationship between subjects (my interviewees) and objects (the variety of cultural forms confronted) were subject to a complex set of historical, cultural, and technological mediations making the subjective moment of experience problematized. Acoustic ecology contradicted this precept. More recently, the breadth of the movement together with its epistemology has been questioned, as indeed as the more newly constituted Sound Studies has in terms of its cultural reach. *The World Forum of Acoustic Ecology* actually referred to Canada and parts of Northern Europe. Sound Studies itself is rapidly becoming a global research project enacted not just by "Northern" academics but also those from the Global South (Steingo & Sykes, 2019).

For a theoretical perspective that appeared to frame my findings more appropriately, I turned to fragments of Critical Theory, by which I mean the Frankfurt School, in order to find a space through which to contextualize my Walkman findings. At the time, these theorists had not received a good reception from either left- or right-leaning academics. Media theorists viewed them as elitist, primarily because of Adorno's apparent rejection of "jazz" music and his analysis of the culture industry more generally, while Western Marxists saw them as clouding the possibilities of Marxist revolution through an abdication of the working classes which were interpreted as replacing by a form of bourgeois social pessimism.

The following four quotes illustrate the attractiveness of the perspective in terms of tracing historical and cultural meanings over time. The first quote is from Siegfried Kracauer from 1929:

> Who could resist the invention of those dainty headphones? They gleam in living rooms and entwine themselves around heads all by themselves; and instead of fostering cultivated conversation (which certainly can be a bore), one becomes a playground for Eiffel noises that, regardless of their potentially active boredom, do not even grant one's modest right to personal boredom. Silent and lifeless, people sit side by side as if their souls were wandering about far away. But these souls are not wandering according

> to their own preferences; they are badgered by the news hounds, and soon no one can tell who is the hunter and who is the hunted.
>
> *(Kracauer, 1995, p. 333)*

Kracauer was describing radio signals transmitted from the Eiffel Tower and highlights the culturally ambivalent and transformative relationship between space, experience, and technology through sound, highlighting what I subsequently argued as representing the mediation of experience through the categories of cognitive, aesthetic, and moral spacings of everyday life. While Walter Benjamin (1973, p. 104) noted the significance of the technological and the sensory in its widest sense in the 1930s when he argued that technologies had "subjected the human sensorium to a complex kind of training," Max Horkheimer situated these observations within a more generalized understanding of sensory experience, within which sound is situated, as historically informed. "The facts which our senses present to us are socially pre-formed in two ways," Horkheimer (1972, p. 200) noted, "through the historical character of the object perceived and through the historical character of the perceiving organ." Add Theodor Adorno's understanding of music as a form of "we-ness" that

> takes the place of the utopia it promises. By circling people, by enveloping them—as inherent in the acoustic phenomenon—and turning them as listeners into participants, it contributes ideologically to the integration which modern society never tires of achieving in reality. . . . [I]t creates the illusion of immediacy in the totally mediated world, a proximity between strangers, of warmth for those who come to feel the chill of the unmitigated struggle of all against all . . . as if one were still living face to face in spite of it all.
>
> *(Adorno, 1976, p. 46)*

Critical theory understood the above as social tendencies and potentialities rather than fully existing empirically at the time. It was this dialectical framework that spoke to my users' accounts of their Walkman use which I referred to as a critical phenomenology. Today I might refer to it as a "critical phenomenological hermeneutics" in order to point to the threads of a historically informed sonic trajectory of mediated experience. In parallel to this, there existed a developing sensory account of experiences portrayed by David Howes and Constance Classen, according to whom sounds "have meanings that can only be fully understood within their particular cultural context" (Howes & Classen, 2010, p. 402). How any sensory system is organized becomes a function of cultural, social, political, and technological change in society. By employing a phenomenological methodology in the Walkman study and using this in conjunction with a reformulated critical theory, a serious dialectic was constructed between structure and experience of Walkman use.

From the Walkman to the iPod

It is not my intention to go into any great depth concerning *Sounding Out the City: Personal Stereos and the Management of Everyday Life or* indeed *Sound Moves: iPod Culture and Urban Experience*, published seven years later, but rather to use them as staging posts in order to discuss subsequent social transformations and continuities within today's technologically and sensory complex world and the qualitative sensory methodologies that we might employ in doing so. Primarily both books asked similar overall questions, primarily what was the nature

and influence of the auditory in everyday life generally; what role did technology broadly conceived play in the construction of those auditory experiences; and lastly what role did the Walkman and then iPods play in the management of the everyday life of users?

The latter book tackled issues surrounding digitalization of the user technologies. The methodology, while remaining qualitatively orientated, targeted a sample of almost 1,000 users worldwide who filled in an open-ended questionnaire and then replied to follow-up questions based upon their responses. Despite this, the results of digitalization and use were not so different in terms of the strategies surrounding use, in terms of cognitive, aesthetic, and interpersonal orientations. What had changed were issues surrounding virtuality with users now possessing greater amounts of music within their iPods than what was possible in whatever iteration of a Walkman one might have used. Playlists could be changed on the move in order to respond to changing user orientations on the spot. Virtualization also gave more freedom to music makers in terms of the duration of songs and the introduction of iTunes extended the power of the Apple Corporation coupling the purchasing of music to iPod use within one platform. Also, mobile phones were increasingly used in tandem to the iPod, at that time mobile phones didn't permit users to listen to music simultaneously to making a call, hence, rather quaintly, I dedicated a separate chapter of the book to the relationship between the use of these two separate technologies: the iPod and the mobile phone.

I will now pick a few user quotes from the two studies in order to provide threads that inform how we might conceive as new developments in the use of mobile media in everyday life—primarily the development of the smartphone.

> Well, I think I've come to the conclusion that overall, I feel pretty out of control in my life. Stores play music to get me to buy more. Work tells me what to do and when. Traffic decides how quickly I get from here to there. Even being in public places forces me to endure other people and their habits. I didn't realize how much I yearned for control and probably peace and quiet. Strange, since I'm blasting music in my ears. I think I'm really tired of living on someone else's schedule. The iPod has given me some control back.
>
> *(iPod user quoted in Bull, 2007, p. 8)*

> I refer to my iPod as my pacemaker, it helps me find that place. I almost exclusively travel to NYC when not in London. I have a dedicated playlist called "NY state of mind" . . . [it has the]sophistication, edge and energy of the place.
>
> *(iPod user quoted in Bull, 2007, p. 37)*

> I then started wearing it [the iPod] whilst shopping. I did it to control my environment and desensitize myself to everything around me. What I found interesting was that the more I wear my iPod the less I want to interact with strangers. I've gotten to the point where I don't make eye contact. I feel almost encased in a bubble.
>
> *(iPod user quoted in Bull, 2007, p. 53)*

> I've gotten to the point that music portability is paramount to my day. I'll take my iPod into a relaxing bath. If my partner is watching TV I'll wear it whilst making dinner. I'll use it to go to sleep.
>
> *(Bull, 2007, p. 64)*

> There is never a point in my day or night that I don't have my phone with me.
>
> *(iPhone user quoted in Bull, 2007, p. 75)*

Walkman use, and especially the earlier period of iPod use, was a discrete mediated activity. Many iPod users reported spending more time listening to music on their devices than before. The strategies of control embodied in the above quotes were largely successful. Privatized use was dominant, music worked well in terms of cognitive control, the asymmetrical interactions with others, and aesthetically, created unsullied imaginaries through music use. This control was achieved only through the use of either a Walkman or an iPod. This paradox was recognized by many as evidenced in the first quote above. This dependency upon their device spread to many areas of their lives, domestically and publicly, but was invariably interpreted positively. Being-with mobile technology extended through mobile phone use yet with less control with a level of unpredictability inherent in communication with others—music didn't answer back after all.

The micromanagement of experience is brought out in the following account. Georgia, a 22-year-old, wakes up to her alarm on her smart-phone; she often sleeps through the alarm, as she's grown accustomed to it. She wakes up and answers two text messages, gets up, and goes for a shower, bringing her phone along, choose the same playlist as not only are the songs some of her favorites but also "good 'morning songs' like '*Sunday Morning*' by the Velvet Underground and Nico is very mellow and happy, and '*People Have the Power*' by Patti Smith is very energetic and inspiring leaving me ready for the day ahead" (Bull, 2013, p. 12). She takes her phone downstairs still listening to music and makes breakfast while reading the paper. She checks the train times on her phone app and goes out where she meets her friend Frankie on the train to work:

> [D]espite being sat next to my friend who I spent most of the morning arranging to meet, now I am with her I am once again on my phone, preferring to play a game than make conversation. She is also playing a game, which means that neither of us make any effort to communicate.
>
> *(Bull, 2013, p. 14)*

Georgia's response to the urban is similar to traditional mobile phone and iPod users. The technology merely allows her to engage in a wider range of mediating activities: "Whenever I'm walking on my own, even for a short amount of time—like walking from my home to the bus stop—I have to either call someone on the phone or listen to my music. I hate being alone" (Georgia).

Today, theorists of the everyday have to contend with complicated and problematic new mediations within global structures in which the relationship between the daily practices of subjects are problematized (Goggin, 2008; Ling, 2020; Miller, 2022). Today, technologies like the smartphone mediate increasing areas of everyday life, transforming our construction of the social. The role that sound and music play is increasingly mediated through visually based activities, gaming, television, and the plurality of social media sites from YouTube to TikTok. Self-surveillance has increased as increasing numbers of people monitor their biometrics, blood pressure, heart rate, and so on (Reeder & David, 2016). Comparisons with others are embedded in these technologies as we work out with our *Peloton* encouraged by our virtual personal trainer. Unlike with Walkman and iPod use, increasing use of social media among the young correlates with increased depression and feelings of isolation.

The structural environment is through which our sense of the self and our "socials" is increasingly pervasive. The structural nature of algorithms is well-known, how we integrate, accept, or transform these less so (Zuboff, 2019). The structural account remains easier to grasp than the "deep-listening" required around the wide variety of responses to this by users. As far back as the 1960s, that Canadian poet of the "bedsit," Leonard Cohen sang, "We are so small between the stars, so large against the sky. And lost among the subway crowd I try to catch your eye." Our place in the world and our sense of social connectivity takes on historical and cultural iterations as do the challenges engendered within the social structures that we inhabit and construct. The relationship between solitariness and connection is complex, both exist in parallel.

After the enforced isolation of COVID-19, music festivals have reappeared where we listen to and watch music performed onstage and on-screen, in communion with others, our smartphones held high, filming the spectacle. Our presence transmitted to many others as spectacle alternative. These are not the same crowds who stormed the American Senate or the Brazilian Parliament, yet their phones were also held high proclaiming "we were there" demonstrating "the power of the powerless." We live in dangerous times in which people have to manage unrelenting flows of information coming at them from every direction in which "inclusivity" excludes many in a technologized consumer world that excludes all of those who cannot manage the sophisticated technology that enables them to even park their cars legally or get their smartphones to work. As the rich get richer and the poor get poorer, some universities in the UK who pride themselves on inclusivity discriminate against those students whose parents are too poor to act as guarantors for the payment of their student accommodation (Brubaker, 2022).

Fake news proliferates through the worldwide net, a trend that Plato recognized 2,500 years ago in the peddling of false knowledge uttered by the powerful aimed at maintaining or gaining power (Plato, 2007). The mimesis embodied in many Walkman and iPod practices articulated earlier have metamorphized in some circles into more insidious rejections of others through misogyny, racism, and other forms of hatred often expressed from the comforts of "home" in isolation and in self-important impotent rage. When Adorno wrote "*The Stars Down to Earth*" (Adorno, 1994), an analysis of horoscopes, he argued that in a world where many people felt powerless and with little knowledge as to how they were situated in the world, they might as well believe that their destiny could be articulated by their relationship to the stars. The peddling of conspiracy theories through the internet is a more pervasive version of this perspective. The subjective moment within social structures requires qualitative critical articulation. The focus on the structural elements and uses of the technologies that we use often fall into either utopian or dystopian frames of liberation or total control. The mediation between structure and volition is however more complex than these dualisms argue for.

So, what about my Walkman user on the beach? Given that I never spoke with him, there are four possibilities taken from *Sounding Out the City*:

1 "Users often report using their personal stereos whenever they are alone in public. Users love to wear personal stereos whilst walking down deserted streets as well as in crowded high streets. Intrusion is a secondary issue in this type of use. Users describe being absorbed in the pleasure of listening uninterruptedly to their own auditized flow of experience. These users prefer to hear their own music whilst on the move. They may or may not take notice of their environment but more often than not they merely attend to their music" (Bull, 2000, p. 187).

2 "Users sometimes describe their experience as particularly pleasurable, not necessarily as a response to loneliness, but as an aesthetic experience. Users often pick music to suit the environment passed through. For this type of usage to succeed it is important that the music is 'correct.' . . . Users describe aesthetically recreating their environment through individually chosen music. Personal stereos used this way permits the promotion of aesthetic or 'filmic' experience" (p. 188).
3 [Some users] feel an overwhelming sense of loneliness whilst on their own. They often report hating being alone, and the use of a personal stereo allays this. We recognize this type of behavior very easily. Users are habitually accompanied by consumer technologies: they switch on the television as soon as they arrive home and they might go to sleep seduced by the sounds of the radio (p. 189).
4 Users might respond to their own "internal" chaos. Users often describe both the desire and the difficulty in ordering their thoughts appropriately. Unwanted feelings and thoughts flood in when they are on their own. The space in their head becomes tolerable enough to "inhabit" (through personal stereo use).

These are not mutually exclusive categories, he might have slipped from one mode of usage to another as his mood suited him! But neither you nor I will ever know. It is in this that the power of sensory ethnography relies, in emically shedding light on subjective experience and interpreting that experience by placing it in its relevant social, cultural, and technological context.

Mark Smith (2021) recently made a rallying call for sensory studies scholars to challenge the precepts upon which sensory history had been based, to a "desire to more actively critique the work that is being produced in a way that simultaneously encourages the production of more scholarship but also considers the core methodological and interpretive issues underwriting sensory history" (Smith, 2021, p. 4). This reinterpretation of the sensory past in order to gaze with eyes afresh at the present and future is supported by Jonathan Sterne's advice in relation to sound studies that it should "be grounded in a sense of its own partiality, its authors' and readers' knowledge that all the key terms we might use to describe and analyze sound belong to multiple traditions, and are under debate" (Sterne, 2012, p. 4). Relatedly, David Howes argued nearly 20 years ago that the sensory turn in research had furthered an attendant theoretical project by investigating "the sensuous interrelationship of body–mind–environment" (Howes, 2005, p. 7). Yet today it is precisely this intensification of cultural and technological mediations that problematizes the subjective moment of corporeality in what *might* add up to its subject–object fragmentation. This is indeed one of the challenges confronting sensory methodology and theory today.

To illustrate this point in a small and rather anecdotal way, I recently asked some students to write up mini autoethnographies of their use of media technologies and apps of their choice in terms of their experience of life on campus. One social phenomenon that stood out was the use of dating apps in order to meet other students on campus. This phenomenon has been researched quite widely, but I wish to bring just a few points forward in the context of the comments above. In the student accounts of the often contradictory mediated presentation of their "self" online was the visual presentation of photographs and text conceived of as putting one's "best face" forward in all of its complexity on their personal profiles. Many of the dating sites also permitted the use of music to convey personality and interest, the choosing of a song working to denote taste, social prestige, and emotional orientation. The students understood the commodification process of the whole exercise but nevertheless

thought that they might somehow transcend the process in the very act of commodification of themselves and others on the dating app. The inherent tension in this position became apparent in the "face-face-meeting" with the "other" as a combination of "interview" and "security risk" as safeguards were put into motion such as friends turning up a little while after the initial meeting in order to potentially "rescue" the subject. The students often mentioned the "estrangement" effect of the process while simultaneously engaging in it. The process of engaging in sensory ethnography in this example remains primarily traditional while in the future might well entail the researcher taking up the "alienated" position of an online persona with subjects becoming increasingly normalized to virtual modes of interaction in which the face-to-face encounter becomes an alien mediation.

Coda: 50 years on

Last year I attended a football match in Brighton. The stadium is adjacent to Sussex University, where I work, the first "live" match I had attended for many years. The seats had to be booked online in advance and were very expensive. On arriving at the ground, there was a festival atmosphere outside, with a wide array of food stalls, bars, and stalls selling merchandise. The smell of fish and ships, burgers, and other foods mingled with the carnivalesque sounds of the football supporters were preparing to enter the ground. I bought my match program as I always had done years before in Southampton and on entering the ground, we found our allotted seats and waited.

We were entertained by a variety of live interviews with football players and staff put up on larges screens placed at each end of the ground, interspersed with recorded music. Around us were families with young children eating crisps and holding their match programs. Ex-Brighton football players were walking around the perimeter of the pitch when I observed a young fan bound down the stairs to get his program signed returning to his parents with a beam of pride and success. We were sitting adjacent to the visiting supporters who were confined to one part of the ground. The match began and the visiting supporters, all standing, sang their songs loudly in support of their team which was Tottenham Hotspur, while the Brighton fans politely sat watching the match as if in a theater. A solitary supporter behind us uttering rather embarrassedly, "come on you Seagulls!"

Toward the end of a rather boring first half, Spurs scored what was to be the only goal of the match which I missed. It was scored at the other end of the ground among a melee of players and for some reason was not replayed on the monitors around the ground. It struck me that if I were watching the match on television at home as I usually did, I would have gotten a better view, even though my vision was being directed by the camera operators filming the match. The real event was in some ways a shadow of the mediated event. At half time, I took my smartphone from my pocket to find out the half-time scores elsewhere only to discover that there was no mobile signal inside the ground. I looked around at the crowd, there were no phones in hand, only people talking to one another.

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4

KNOWING THROUGH THE RACIALIZED SENSES

Sachi Sekimoto and Christopher Brown

We begin this chapter by addressing the "N" word. Now, this is not the N-word that you might be thinking about—the word that may conjure imagery of an ethnic slur—but the N-word that we want to discuss is the word "nothing." There is quite a bit of philosophical and academic interests on the idea of "nothingness," but what we are referring to, quite literally, is the state of not having anything. Suppose that you walk into an empty room and there is nothing in it. You will without much conscious thought deduce that there is "nothing" in the room. Why? Well, if you see that the room is vacant, there are no chairs, no desks, no television, no couch—all those objects that you define as a room containing something—without them, it would be reasonable for you to conclude that there is nothing in the room.

Of course, there is a floor or maybe a ceiling, painted walls, brick walls, or windows—depending on your architectural imagination—and even air circulating that makes up what you perceive as a room. However, we generally think of the floor and ceiling, and objects alike, as existing as part of the room. We may also think of the air that is circulating the room as part of the emptiness of the room because it is invisible to us, but not imperceptible—there are molecules (oxygen or nitrogen) that we are inhaling and bouncing off the walls and off our bodies. But, if we open a door to a room, walk in, and see chairs, a desk, a couch, table—or, as those conscientious observers might note, the fact that you are observing the room suggests that you are part of the room—these objects including your body in the room make for the something in the room, rather than nothing. So, how do we come to know what is the fullness or the emptiness of a room? The primacy of our vision (of seeing what we know of as something). We see it, therefore it exists. Right?

Let's put it another way—to be color-blind is not to see race. For instance, some people have come up to us and said, "I don't see your color and I only see you." Of course, these people could look at us and see that our skin color is of a darker shade, but what they are implying is that they don't see what is considered a manifestation of race. Then again, let's add other senses to this explanation, such as interoception. Interoception is a sense that helps us understand and feel what is going on in our body. When we walk into a room, what is sometimes less known to us or thought about is how the multiple and combined senses that we feel in our body are activated in experiencing the fullness and emptiness of a room (think

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about it—the smell of the room touches our noses; the sound of the room vibrates in our ears; the emptiness of a room once filled with memories of joy, love, struggle, or sadness produces adrenaline in our body increasing the rate of blood circulation, heart rate, or breathing). This is to say that our senses are at play in how we receive the substance of the room. In the same way, when we think about racialization, the assemblage of our sensory input and output producing those sensations within us (like the knot in our stomach, stimulation in our gut, or quivering in our hands) guide our actions in situations where we perceive race or racism. In other words, we feel the racial inscriptions not only on our body (what you could see) but also in our body (what you could feel) and this shapes how we act, behave, and relate in a multicultural world (Sekimoto & Brown, 2020).

Some people assume there is a sixth sense (a way of understanding the world beyond the five senses—we somehow feel it before it acts on us). For instance, we once heard a black TV news anchor state that black people have a sixth sense about race, meaning we feel it just before it comes to us. In thinking about the example of the room with nothing, you could assume a black and white person could walk into the same room together and have different interpretations of whether the room is full or empty of racial meanings—different senses of the something or the nothing of race. We are interested in this phenomenon of "we feel it" in considering not only the collection of senses but also our sensuous realities (texture, movement, and rhythm) that make race feelable (or un-feelable) to us. In this sense, racial awareness is about our bodily awareness or our shared senses of racial meanings in the environment. We want to draw your somatic attention to how your differently racialized and gendered bodies both mediate and materialize the "feel" of rhythms, movements, and experiences of your bodily sensations in space.

Race surrounds us and circulates like the air in the room with nothing. The extent to which you feel the racial atmosphere—and how it feels on your skin—depends on how your racial embodiment is afforded in the particular space and time. In this chapter, we draw attention to sensing race in the practice of sensory ethnography. By drawing insights from the phenomenology of racialized embodiment, we bring sensorial awareness to the implications of race in ethnographic inquiry. First, we articulate racism as a formation of racialized relations of sensing between the sensing subject and the sensed object, which cumulates into a community of sensing/sensed bodies along the color lines. Second, we bring attention to the racialized body—and how it learns to feel and be felt in the social world. Finally, we discuss the notion of emplacement through the phenomenology of racialized embodiment. We conclude the chapter by discussing the implications of racialized sensory awareness in the practice of sensory ethnography. Throughout the chapter, we draw insights from the phenomenology of racialized embodiment to consider how sensory ethnographers may exercise critical self-reflexivity with their racialized embodiment, emplaced bodies, and relations of sensing that are formed in ethnographic practice.

The racialized relations of sensing

> "Look! A Negro!" It was an external stimulus that flicked over me as I passed by. I made a tight smile.
>
> "Look! A Negro!" It was true. It amused me.
>
> "Look! A Negro!" The circle was drawing a bit tighter. I made no secret of my amusement.

> "Mama, see the Negro; I'm frightened!" Frightened! Frightened! Now they were beginning to be afraid of me. I made up my mind to laugh myself to tears, but laughter had become impossible.
>
> (Fanon, 1967, pp. 111–112)

In his account of racial interpellation where a little white boy cries out, "Look! A Negro!" Fanon profoundly illuminates the relations of sensing that are established in this short, yet irreversible encounter. What is established in the fearful uttering of "Look! A Negro!" is not merely a relation of gaze (the one who sees and the one that is seen) but, more importantly, a relation of sensing—the little white boy who is frightened, and Fanon's black body that is a felt object of fear. Fanon discovers his blackness and his racial embodiment through the gaze placed on his body. The little white boy secures the position as a sensing, observing subject who determines Fanon's body as an object that emanates danger. A little white child is frightened—who could doubt or make light of such a vulnerable feeling? While Fanon's account of this encounter emphasizes the notion of racializing gaze in terms of how black bodies are fixed by the white gaze, what we deem more profound in this instance is the constitution of white subjectivity as that of a sensing, whole-body subject, whose bodily sensations and feelings act to confirm and prove the criminality and barbarity of black bodies.

In his historical account of sensory construction of race and racism, Smith (2006) shows how white slaveowners in the US South used sensory stereotypes to deem black bodies as childlike, less sophisticated, indulgent, simplistic, and numb to pain. They claimed the "authenticating power" of their senses (p. 63) to distinguish blacks from whites in the increasingly mixed-race, visually ambiguous, racial landscape in the United States. To counter the racial ambiguity of physical appearance, they claimed that they can hear, smell, and touch blackness. What is most notable in this relation of sensing established during slavery—whose legacy is still very much alive today—is the constitution of white subjectivity as dominant and normative sensory experience. As we discussed elsewhere:

> [W]hiteness can be viewed as an embodied sensory subjectivity that assumes itself as the normative, standard, human sensory experience. . . . To objectify others, one must take away their ability to sense the fullness of reality. The objectification of black people and other racial minorities is complete when their subjective sensory experiences are in doubt. In this case, whiteness becomes normative insofar as it is a form of hegemonic sensory order that renders racialized others' senses as not normal. Whiteness becomes an embodied location of sensorial authority that is entitled to claim how nonwhite others feel.
>
> *(Sekimoto & Brown, 2020, p. 31)*

White bodies—here, we are referring not to a skin color, but to a historical–racial schema—function as the medium of sensorial confirmation, an anchoring point that establishes and regulates the relations of sensing across the color lines. What the white bodies feel are deemed authentic, real, and the most cultivated sensibility. They assume the position of "I feel it, therefore it is real" or "I fear you, therefore you are dangerous" (p. 132). Black bodies—again, not as a skin color, but as a historical–racial schema—instead experience the duality between their interiority (what they feel inside) and their exteriority (how their external appearance overdetermines their social ontology). Racialization displaces the black bodies' sensorial authority and ownership over their own lived experiences.

In the following passage, Fanon describes how his own senses and sensations are displaced by the stories told by the white man about blackness:

> Below the corporeal schema I had sketched a historico-racial schema. The elements that I used had been provided for me not by "residual sensations and perceptions primarily of a tactile, vestibular, kinesthetic, and visual character," but by the other, the white man, who had woven me out of a thousand details, anecdotes, stories. I thought that what I had in hand was to construct a physiological self, to balance space, to localize sensations, and here I was called on for more.
>
> *(Fanon, 1967, p. 111)*

What we find profound is not the objectification as a lived experience of blackness, but rather how Fanon experiences his own body—a location and foundation of one's existence—as an object of fear and hate. There is a mutually constitutive process in establishing the racialized relations of sensing between the feeling subject and the felt object (i.e., there is no "black-body-as-object" without "white-body-as-subject). The felt object, however, is always already feeling what it means to be an objectified, fear-emanating Other. Fanon's writing evokes phenomenological depth and existential urgency because it is an attempt to recover from the seemingly impossible paradox of object–subject dichotomy or the dualism of interiority and exteriority: "I am overdetermined from without. I am the slave not of the 'idea' that others have of me but of my own appearance" (p. 116). What does it mean to occupy a body that others are afraid of? How does one live such an impossible intersensorial reality where one understands the fear of others (empathic connection) through the very body that is causing such fear? The seemingly innocent and vulnerable senses of the little white boy have the power to freeze Fanon's self-image into that of an object of racializing gaze. In the racialized relations of sensing, the constitution of the sensing Subject is as crucial as the construction of the objectified Other. Race as a hegemonic social construct requires a relation of sensing between the sensing, authenticating subject and the sensed, authenticated object.

Approaching anti-racism through racialized trauma, Menakem (2017) argues that anti-racist efforts that focus on the changes in cognition—ways of thinking about racial others—fail to address what he calls white-body supremacy. Referring to some of the most pervasive racial stereotypes surrounding the black body created by white-body supremacy, such as the black body as dangerous, hypersexual, and indestructible, Menakem points out:

> Except among members of white supremacist groups such as the KKK and the Aryan Nations, these concepts [racist stereotypes against Black bodies] are not attitudes, cognitive beliefs, ideas, or philosophies. They are far simpler and far more primitive. They are nonverbal sensations felt by white bodies, along with fear, hate, and constriction. Or, to put it another way, they are nonverbal stories white bodies tell each other. Even to call them concepts isn't accurate. *Sensations or impressions come closer.*
>
> *(p. 91, original emphasis)*

Racism can be understood as the relations of sensing in which those with a dominant and hegemonic historical–racial schema inherit and inhabit the ways of sensing and marking the racialized Other through sensations and impressions that viscerally confirm and reify the historical relations of superiority and inferiority. The racial color lines emerge and congeal, not

based on the shades of skin, but by forming the communities of sensing/sensed bodies that conform to the historically habituated ways of sensing "us" and "them."

The racialized body

> On that day, completely dislocated, unable to be abroad with the other, the white man, who unmercifully imprisoned me, I took myself far off from my own presence, far indeed, and made myself an object. What else could it be for me but an amputation, an excision, a hemorrhage that spattered my whole body with black blood?
>
> *(Fanon, 1967, p. 112)*

To live in a racialized body is to live with an awareness and sensations of one's own otherness. For Fanon, there is no such a thing as simply being black as a person: "For not only must the black man be black; he must be black in relation to the white man. . . . The black man has no ontological resistance in the eyes of the white man" (p. 110). Race is a technology that produces a sensorium or a perceptual environment that divides those who assume the position of sensorial authority and those who are "an object in the midst of other objects" (p. 109) to be sensed. What is often underappreciated—due to the sensorial authority of whiteness—is that the racialized Other feels the sensations of being felt, observed, described, analyzed, and dissected as objects.

In her essay "Skin Feeling," Samatar (2015), a Somali American professor, writes about the "enervating visibility" of academics of color as "symbols of diversity" or "diversity itself" that "legitimizes the structures of exclusion" in the institution of higher education (para. 9). Imagine, you breathe, walk, teach, and show up at a meeting constantly, and without a failure, as the living evidence of a "diverse university." She describes the feeling of hypervisilibity as a racial minority on campus as "skin feeling: to be encountered as a surface" (para. 11). Instead of being encountered as a multidimensional, potentially flawed, and unique individual, every encounter unfolds as a way of treating you as a surface of representation of ideas and images about diversity. A "colored" body is encountered as a surface on which the inscriptions of diversity narratives are written and rewritten according to the desires and willingness of the hegemonic white majority. Samatar elaborates on her experience of living as a token of diversity—to be treated as a box to check off—who is expected to show up on diversity committees as an embodiment of "diverse people." She describes such constant sense of hypervisible exposure as "skin feeling: to be constantly exposed as something you are not" (para. 19). Imagine what it feels like to live in a sentient, feeling body when the body is constantly treated as an object that is reducible to statistics and head count. What does it do to the breathing, growing body when it is coded for its visible surficial features, but not understood for its warmth, depth, and interiority?

Samatar argues the constant exposure as an object of racializing gaze heightens one's desire to be felt, touched, and embraced as a full-bodied human being, to release oneself from the skin feeling of being a mere surface. As we argued elsewhere:

> The genius of racism is that it targets the skin (and its color), because the skin is not only a visible marker of differences but also a feeling organ. Racialization produces a prosthetic skin over the racialized boy: we may call this a second skin. The second skin becomes a prosthetic organ through which racialized subjects feel the world.
>
> *(Sekimoto & Brown, 2020, p. 136)*

On the one hand, skin establishes the material certainty of "not me"—the experience of being touched by another person is distinctly different from touching oneself—therefore drawing a boundary between self and other. On the other hand, we also encounter tactile experiences that blur the boundary between self and other. Imagine, for example, a simple act of holding hands with a loved one. The sensation you feel between two hands reminds you of the fact that you are simultaneously a tactile subject and object. Your hand is touching and being touched at the same time. In fact, it is the act of touching that enable you to be touched—or, without being touched by something, you cannot touch anything (Merleau-Ponty, 1962). The act of touching engenders the possibility and risk of being touched in the haptic cycle of subject–object relations: "Skin opens our bodies to other bodies: through touch, the separation of self and other is undermined in the very intimacy or proximity of the encounter" (Ahmed & Stacey, 2001, p. 6). It is precisely this porosity of tactile experience that makes skin such a politicized organ of the human body. A racist society turns the feeling membrane that allows us to feel with and for others into a surface of social inscription, as Fretwell (2020) wrote, "The skin is the seat of consciousness, but because skin has color and texture, consciousness is as subject to racialization as the rest of the body" (loc 5614).

Feminist and critical race scholars have noted that unlike Merleau-Ponty's universalist view of phenomenology of the body, the socially constructed differences such as race, gender, class, ability, sexual orientation, and class alter the way the world touches one's skin, and how their embodiment is conditioned to interface with the world (Ahmed, 2007; Ahmed & Stacey, 2001; Fretwell, 2020; Henson, 2020; Lee, 2014; Marks, 2000; Ngo, 2017, Young, 2005). Prosser (2001) points out the phenomenological function of skin as repository of memories and histories, in that "Skin re-members, both literally and in its material surface and metaphorically in resignifying on this surface, not only race, sex and age, but the quite detailed specificities of life histories" (p. 52). Such skin memories, argues Prosser, "may remember not just an individual unconscious, but a cultural one," including how a darker skin is historically and socially stigmatized (p. 54). If racialization (not only of bodies of color, but also of white bodies) is a process of "epidermalization" (Fanon, 1967, p. 11), what are the ethnographers' responsibilities and limitations in constructing knowledge through the surface that surrounds their bodies? What does it mean for sensory ethnographers to attend to the (differently racialized and gendered) epidermal surface of their own bodies in their encounter with ethnographic participants? How should sensory ethnographers grapple with the process of attending to "not only to the sensuality of being-with-others, but also to the ethical implications of the impossibility of inhabiting the other's skin" (Ahmed & Stacey, 2001, p. 7)?

Racialized emplacement

> In the white world, the man of color encounters difficulties in the development of his bodily schema. Consciousness of the body is solely a negating activity. It is a third-person consciousness. The body is surrounded by an atmosphere of certain uncertainty. . . . A slow composition of my*self* as a body in the middle of a spatial and temporal world—such seems to be the schema. It does not impose itself on me; it is, rather, a definitive structuring of the self and the world—definitive because it creates a real dialectic between my body and the world.
>
> *(Fanon, 1967, pp. 110–111, original emphasis)*

If racialization produces a second skin as a tactile surface of the body through which individuals and groups experience the world, it also shapes their experience of being-in-place. How one finds themselves in a spatial and temporal environment is a multisensorial experience that undergirds their phenomenology of bodies, place, and social worlds. If, as Fanon states, racialization manifests as a form of epidermalization (becoming a skin, or becoming a surface), such experience of racialization has a deep implication on how the body can be emplaced in space. In sensory ethnography, the notion of emplacement plays a key role in defining the approach to embodied ethnography—to recognize one's body is present as participant observer/researcher/knower in the environment. Emplacement refers to the "sensuous interrelationship of mind–body–environment" (Howes, 2005, p. 7). Pink (2015) proposes "an emplaced ethnography that attends to the question of experience by accounting for the relationships between bodies, minds, and the materiality and sensoriality of the environment" (p. 28). What Fanon describes in the opening quote of this section, however, reflects a sensorial and spatial displacement of his body in the "white world." His body is surrounded by "an atmosphere of certain uncertainty" (pp. 110–111) where he is unable to discover the "febrile coordinates in the world" (p. 112). For Fanon, his emplacement/displacement in the white world is not based on his scholarly curiosity or ethnographic interest; rather, he is hypervigilant of his body and its presence in the environment: "I investigate my surroundings, I interpret everything in terms of what I discover, I become sensitive" (p. 120). In other words, his body has become a sensor that gauges the meaning and implications of the presence of his black body in relation to its surrounding. The nature of his dis/emplaced embodiment seems qualitatively different from the prevailing theoretical assumptions of sensory ethnography that endorse the researcher's body as a location of sensuous, open-ended knowing. The notion of emplacement, without attending to such varying experiences of racialized being-in-place, may simply perpetuate the social, racial, and gender privilege of those positioned as researcher. Not all ethnographers can or should show up in a field expecting to be emplaced and afforded in space.

Consider, for example, how whiteness

> may function as a form of public comfort by allowing bodies to extend into spaces that have already taken their shape. Those spaces are lived as comfortable as they allow bodies to fit in; the surfaces of social space are already impressed upon by the shape of such bodies.
>
> *(Ahmed, 2007, p. 158)*

Whiteness manifests as a tactile and kinesthetic experience of emplacement "in which the social and material environment affords and extends their body" (Sekimoto & Brown, 2020, p. 63). In his extension of Ahmed's discussion, Yancy (2012) wrote:

> To be white in a white world . . . is to be extended by that world's contours. The world opens up, reveals itself as a place called home, a place of privileges and immunities, a space for achievement, success, freedom of movement.

On the other hand,

> [t]o be black in 'the white world' is to turn back toward itself, to become an object, which means not only not being extended by the contours of the world, but being diminished as an effect of the bodily extensions of others.
>
> *(p. 45)*

Racialization encodes into one's embodiment its mobility, flexibility, and extendibility into space. Emplacement, in this case, is not a manifestation of how a mind–body is placed within a given environment in a particular moment, but how the mind–body interfaces with the historicity of the particular relations of sensing in a given encounter. Perhaps it is more precise to understand that emplacement is an *interkinesthetic experience*—how bodies (are allowed, afforded, or rejected to) move in coordination with other bodies and objects in the environment (Kim, 2015; Mark, 2019; Sekimoto, 2023). It is the historicity of the relations of sensing that shapes the mobility, flexibility, and extendibility of the body as an ongoing outcome of emplacement.

Knowing through the othered senses

> I move slowly in the world, accustomed now to seek no longer for upheaval. I progress by crawling. And already I am being dissected under white eyes, the only real eyes. I am *fixed*. Having adjusted their microtomes, they objectively cut away slices of my reality. I am laid bare. I feel, I see in those white faces that it is not a new man who has come in, but a new kind of man, a new genus. Why, it's a Negro!
>
> *(Fanon, 1967, p. 116, original emphasis)*

Fanon's insight into the phenomenology of racialized embodiment is deeply instructive in expanding the theoretical and methodological futures of sensory ethnography. Remember the room with "nothing" where we began this chapter? Let's step into the room again with the awareness of how a racialized body shows up in space. For Fanon—and for other racialized bodies—there is no such a thing as merely showing up in a room with nothing. Showing up is always an act of participating—albeit unwillingly or unintentionally—in the relations of sensing that are historically encoded into the physical and cultural space. His body shows up as a black man, as a surface of "thousand details, anecdotes, and stories" (p. 111) to be dissected and analyzed. If we call this a process of emplacement, we must recognize the existential angst of becoming a black body in an empty, white room. To put it differently, the room/world becomes white as a dialectical relationship between his blackness and dis/emplacement in it. His black body becomes an object that occupies the room, turning the room with nothing into a room with something.

While Henson (2020) focuses on the performative aspect of blackness in ethnographic work, the relationality between the ethnographer and the ethnographed is not only performative but also sensorial. While ethnographers of color may experience a heightened sense of one's racial embodiment and its meaning in the racialized labor of ethnography, it does not mean white ethnographers can assume a neutral, color-blind presence. How their bodies become white—not as a skin color, but as a historical–racial schema—is another sensorial phenomenon worthy of careful self-reflection. There is a need to consider the ethics of showing up as a sensing subject, the ethics of requesting to be a part of the relation of sensing in the space inhabited by ethnographic participants. The act of being emplaced in someone else's social space is an act of requesting to potentially alter, disturb, and introduce new relations of sensing in the community. The historical legacy of the power dynamics between the sensing subject and the sensed object in the formation of racial hierarchy asks us to carefully reflect on the sensorial authority assumed by the embodied ethnographer. Such a position of sensing is inter-sensorial—the sensed object is sensing, feeling, and interpreting their findings about what it means to be storied into ethnographic narratives. Sensory ethnography as

a methodology may be viewed as an ethical and epistemological practice of relating through sensing—and such attempt to relate to other (and othered) ways of sensing and experiencing the world is fraught with the possibilities of re-emplacing the historically constructed relations of power between the knower and the known. Without understanding how racialized knowledge is produced through the displacement of the body-in-space and the disruption of the mind–body–environment, the notion of emplacement remains oblivious to the racially charged context that informs various ethnographic studies.

As a research praxis, sensory ethnography cultivates researchers to attend to the research participants' sensory paradigms and ways of being. It is perhaps less likely that sensory ethnographers would show up in the empty room and say, "there is nothing in the room." Yet, it is also important to remember that one's sense-based observation skills are shaped and filtered through the historically encoded, racialized, gendered, and classed relations of sensing, their epidermalized bodily surface that interfaces with the world, and the im/possibility of emplacement in a particular social space. If "participant sensation" (Howes, 2019) is the desired mode of knowing in sensory ethnography, to what extent is it possible to *feel with* ethnographic research participants when the racial lines are materialized and habituated in our bodies? Along with Boswell (2017), we ask: To what extent can a white sensory ethnographer share and participate in the sensations of race and racism on and through their white skin? In the same token, how would a sensory ethnographer feel with those who are differentially gendered, sexualized, marginalized, abled, classed, and emplaced in the worlds of social stratification and division? An embodied ethnographer's othered senses—rather than the normative sensibilities—may present an epistemological opening toward discovering an empty room full of something to be sensed, related to, and known, rather than nothing.

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5

GETTING A GRIP ON NEW OBJECTS, TECHNOLOGIES, AND SENSATIONS THROUGH AURA, PRESENCE, AND MIMESIS

Mark Paterson

How do we *feel* about the novel objects and sensations which increasingly form part of the background of everyday life, channeled through ubiquitous consumer devices and technologies, especially in advanced industrial economies? Beneath many of the mundane experiences of handling and checking our smartphones, navigating our way, closing car doors, or visiting retail stores, for example, the sensory properties of objects and environments have been intentionally designed and tested, offering novel sensations to which we have become habituated over time. Streams of notifications on electronic devices, the buzzing and pinging that signal states or events, continually direct our attention at home and at work. Cars and trucks with digital gearboxes designed to feel "just right," their engines to sound powerful, and the car doors designed to close with a satisfying sound and feel. The videogame controllers with haptics which rumble and strain, further immersing the player in the game. Haptic bodysuits which promise even greater immersion in virtual environments through feedback distributed around the body.

This seemingly accelerating production of novel sensations through technological means has been going on for a while. As Walter Benjamin observed in his classic 1935 essay "The work of art in the age of mechanical reproduction," classical modernity with its shifts in industrialization and automation, the rhythms of factory, car, railway, and cinema film alike, profoundly altered our sensorium. Thinking with philosopher and cultural critic Walter Benjamin, and the historian of modernity Wolfgang Schivelbusch, in this chapter I explore what the concepts of "aura," "presence," and "mimesis" add to the sensory ethnography vocabulary. By so doing, I show how the urge to capture the "feel" of the new objects and novel sensations produced through confluences of technology, design, and everyday life has been historically persistent, yet always somehow elusive.

A distinct sensory ethnography has become increasingly established over the past few decades and one of its strengths lies in its capacity for creative interpretation, and its embrace of diverse approaches, rather than a single standard model or easily applicable toolkit. In this chapter, I reflect on my own ethnographic fieldwork testing haptic technologies at the turn

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of the millennium with artists, engineers, and designers in Scandinavia, the United States, and the United Kingdom. The technologies tried to engineer the right "feel" for the user such as virtual gearboxes for vehicles, simulated syringe injections, and haptic bodysuits for virtual environments, resulting in an amalgam of empirical and conceptual materials that required piecing together. At the time, the task of comprehending how the virtual presence of objects could be made to feel "real" was accomplished through a mixed-method hybrid of ethnography, including interviews in laboratories and tech start-ups, along with phenomenologically-influenced autoethnographic observation.

The first section of this chapter, "Reaching in and touching a virtual object," offers a brief overview of this research and identifies some issues in writing coherently about somewhat disparate sensory technologies and fragmented experiences. The second section, "Getting a grip on new sensations," offers some insights on the conceptual underpinnings of novel sensory experience, giving examples from the historical literature that may still find application to new and emerging technologies. These suggestions are not exhaustive, of course, but meant as an invitation for the sensory scholar to consider placing what seems novel and exciting within a longer historical arc in which the sensorium has long been undergoing alterations through innovations in industry and entertainment. The third and final section, "Getting a grip on the empirical material," deals directly with the elusory and ephemeral nature of sensation. In one of the first publications to emerge from my fieldwork, for example, I wrote about getting a "maximal grip" on the situation (Paterson, 2006), employing Hubert Dreyfus's (2000) use of a concept originally from phenomenologist Maurice Merleau-Ponty. This metaphor of "grip" was also applicable to my own orientation to the diverse empirical material. I simultaneously recognized the inherent difficulty of writing and representing such novel sensations and noted that ultimately the analogy of grip breaks down, eludes our grasp, and is more difficult than we expected to put our finger on. Consequently, in this final section, I revisit such "non-representational" or "more-than representational" implications for a reflection on the development of this more elusive aspect of sensory ethnography, and, to employ further suitably haptic metaphors, of grappling with the means by which to interpret, analyze, and then textually represent unfamiliar combinations of digitally produced sensations.

Reaching in and touching a virtual object

Stockholm, Sweden, September 2000. Fascinated by the sensory possibilities of some emerging technologies, I was in the labs of a tech start-up called ReachIn Technologies AB, talking to their chief engineer and his team, and about to experience their most recent innovation: the ReachIn Desktop. A spinoff from the University of Stockholm, ReachIn had produced a variant of an existing high-end haptic interface called the PHANToM (Personal HAptic iNTerface Mechanism, see Figure 5.1), a device originally designed at MIT in 1996 which allowed users to feel the surfaces and textures of a computer-modeled three-dimensional object through what engineers call "force feedback." Force feedback is a set of artificial resistances to the user's movement through electric motors in the X, Y, and Z spatial axes, and in haptics devices the tactile properties of texture and solidity are produced to selectively counter the movement of the user. As Mahoney (1997, p. 41) puts it, the user's "force is input and reflected via a physical interface device, which can be anything from a joystick or steering wheel to a thimble or an exoskeletal structure."

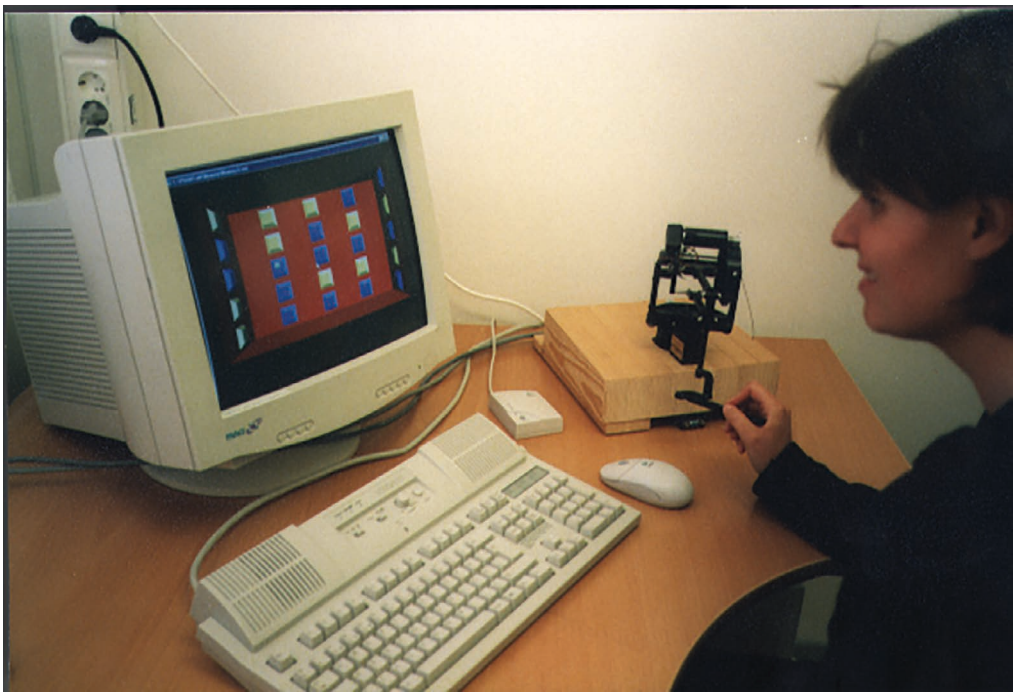

Figure 5.1 The PHANToM interface at CERTEC, University of Lund, Sweden, 2000. Author's photograph.

In the case of the PHANToM, the resultant pressure on the skin and movement of the arms, hands, and fingers afforded the user the sense of manipulating a virtual object with tools in a limited three-dimensional space atop the desk. The main means by which the user interacted through this device was via a stylus which is grasped—or a receptacle like a thimble which receives a fingertip—both at the end of an articulated metal arm. With the variability of the strength of the electromotor forces in three dimensions opposing that of the user, and the variability in frequencies of the motor, varying levels of hardness, softness, roughness, smoothness, or elasticity of an object could be modeled. As the co-inventors of the PHANToM, Thomas Massie and Kenneth Salisbury, explained:

> A significant component of our ability to "visualize," remember and establish cognitive models of the physical structure of our environment stems from haptic interactions with objects in the environment. Kinesthetic, force and cutaneous senses combined with motor capabilities permit us to probe, perceive and rearrange objects in the physical world.
>
> *(Massie & Salisbury, 1994, p. 295)*

The importance of "visualizing" and interacting with virtual objects in the physical world, and of attaching real-world tactile sensations to them, was the primary motivation behind the PHANToM. The added physicality involved in displaying computer models greatly aided the semblance of presence.

Figure 5.2 The ReachIn AB Desktop interface, integrating the PHANToM with a screen overlay. Photograph from ReachIn AB, Stockholm, 2000.

ReachIn's innovation was to place some reflective glass directly over a PHANToM upon which a computer-generated image was projected (Figure 5.2; see Paterson, 2006, 2007, ch. 7 for more detailed accounts of these technologies). Essentially, as the computer display above was reflected onto a semitransparent screen at desk level, with a PHANToM underneath, through specially written software that modeled medical encounters a visual model was superimposed directly onto the haptic model that one could feel underneath. It was an illusory, though undeniably effective, shared space of vision and touch through which a virtual tool could be wielded and objects manipulated. As the company boasted on their now-defunct website (ReachIn.com) in 2001 (n.p.): "When the stylus [of the PHANToM] hits something displayed in the mirror, you find that the objects there have surfaces, weight, viscosity and all the other properties of real world objects that you can feel through a tool."

This sounded compelling, but what did it actually feel like? First, I was shown a demonstration, which involved recreating the sensations of injecting an arm with a hypodermic syringe through the interface. Then, it was my turn to interact. Although the graphics of the model were unimpressive, the collocation of the haptic and the visual senses gelled together and offered up a startlingly lifelike experience, more than the sum of its sensory parts. Visually, there was enough detail to see veins on the hand and, through 3D modeling, an elastic deformation of the skin before it was punctured. Then, as the needle was extracted slowly, the realistic-seeming stretch of a point in the skin, ending with a sudden freeness of movement as the needle emerged clear of the flesh. From the perspective of a non-expert user like me, this was not just about touch, about recreating pressures on my skin surface. It was the simulation of a series of novel sensations that, together, offered something like a proprioceptive verisimilitude, that is, *the* "*feeling*" of manipulating a computer model in a seemingly realistic way.

This technology, along with others such as the virtual gearstick, the haptic bodysuit, and the chess game for vision-impaired players that I tried later in that Scandinavian research visit, posed real challenges to the researcher. The empirical backbone of my doctoral research consisted of extensive written notes and a series of diligently transcribed interviews with engineers, designers, and artists. Practically, how could I turn these texts charting a novel landscape of sensations into a richly descriptive written form which conveyed my felt experiences to the reader? Especially given that we so rarely consider, never mind try to articulate or describe, the usual background sensations the devices were attempting to model? In some ways, this was a problem of overcoming the very familiarity of types of bodily experience that are already conjunctions of underexamined sensations. This includes movement (kinesthesia), the body's position in space (proprioception), feelings of pressure (mechanoception) and temperature (thermoception) on the skin (Paterson, 2007; on the neuroscience of proprioception, see Paterson, 2021), and what I would later find out in robotics literature as the "shear" force when losing grip of an object. Since these familiar sensations were usually felt in combinations, subjecting them to scrutiny soon opened up a completely new perspective on the senses, and problematized the rather singular notion of "touch" that people generally assume. The puzzle of putting those sensations into written form began with all the materials assembled, and the interviews painstakingly transcribed, after returning to my home institution. This process of the reconstruction of empirical fragments and my own bodily experience resulted in a sensory ethnography of new objects and novel sensations. Part of the puzzle was a central hermeneutic problem. The difficulty of articulating these novel combinations of sensations through spoken or written language would be a problem not just for me as a sensory ethnographer, but for my interviewees and interlocutors, too.

Take what Tomer Shalit, the product manager at ReachIn, said when replying to a question about what makes the ReachIn Desktop feel so uncannily real, why the experience seems to work:

> [W]hen it comes to the visu-haptic [*sic*], what makes a big difference is the collocation, which is both [i.e. both visual and haptic]. But somehow this collocation thing of ReachIn makes a big impact on the gut feeling. And *we don't know why, but that's empirical!*
>
> *(Shalit, interview 13/9/00; emphasis added)*

That visceral component, something that emerges from the experiential collocation of the visual and the haptic, lends itself to other applications outside the field of medical simulation.

The production of artificial haptic sensations can be applied to more creative product and interaction design contexts to assemble "digital mock-ups" or virtual prototypes that can be experienced and evaluated by user groups. ReachIn had done work for automotive manufacturers such as Saab-Scania and Volvo, for instance. In one memorable interview, the sales manager Annika Hofsten explained how the ReachIn was used in implementing user-centered design. A purely hypothetical piece of engineering, in her example a gearbox, could be imbued with different sensory properties, and these sensations could then be iteratively altered and reconfigured through the accompanying software to achieve the right overall "feel" for the user. This right "feel" is, inevitably, both unquantifiable and difficult to describe or articulate. The solidly satisfying "thunk" of a car door closing, or of moving a gearstick into place, arises from a particular combination of auditory, visual, and kinesthetic stimuli. It is in chasing such viscerally recognizable yet barely articulable sets of sensations that the role of the haptic interface comes in. The iterative experimentation with a conjunction of different forces and sensory stimuli is explained by Annika herself as "playing with different feelings":

> What do you want the feeling to be like when changing gears in the car? Do you want it to be the Scania feeling, you know, a lot of power . . ., you could do it just by pressing button, 1,2,3,4,5 [or] how many gears you have, but this is not the right feeling. And the old Scania drivers, they don't like it, they prefer to have the old feeling of changing gear, you know, and *this is a kind of playing with different feelings*, and they can still implement the new technology but keep the old feeling.
>
> *(Hofsten, interview 13/9/00, emphasis mine)*

The digital reproducibility of the "old," recognizable forms of user interaction, first in the medical context with a hypodermic needle and modeled body parts, and then with the gearshift of a car or truck, was an exciting application of haptic technologies. But again, the engineers, the sales team, and the product manager through the use of rather vague language such as "old feeling" (Annika) and "gut feeling" (Tomer) were gesturing toward a set of recognizable bodily sensations, and it was time to get a firmer "grip" on them.

Along with professional and high-fidelity desktop interfaces like the PHANToM, and the hybrid visual-haptic ReachIn for training, a parallel development in the consumer world has been the increasing ubiquity of haptics in videogame controllers and then smartphones, with "rumble" (vibration motors) initially as an additional unit to the Nintendo N64 controller with the "Rumble Pak," the DualShock controller of the original Sony PlayStation in 1997, and is present in some form in every subsequent generation of console, including the Xbox. Since 2011, Apple's iPhones have had vibration, and in 2015 Apple developed their version of haptics known as the Taptic Engine, a relatively precise linear resonant actuator vibrator. Android phones have also been implementing improved haptic hardware in collaboration with firms such as Lofelt. With force feedback joysticks and steering wheels which resist movement and rumble when the player's simulated vehicle goes off-road, as well as the standard controllers, our consumer electronics are awash with cheap but effective haptics. Current generation consoles such as the Nintendo Switch and PS5 even have "HD" (High Definition) haptics. Force feedback clearly adds something valuable to the player's experience of the game, and although histories of videogaming and media archaeologies are looking at the historical development of force feedback and vibration (e.g., Parisi, 2019), little has been

written about the first-person experience of such sensations. This realm of haptics, where engineering and consumer electronics meet, extends to haptic bodysuits.

Distributing the rumble or the buzz to different parts of the body and having haptic sensations as an additional channel for rapid interaction, communication, or attention has a long history in science and engineering labs, with trials for haptic communication through the skin, for example. Robert Gault and his multi-unit "teletactors" at Bell Labs in the 1930s translated speech into vibrations on the fingers of the hand, and Frank Geldard's lab at Princeton funded by the US military tried out a system called Vibratese in 1957 that allowed communications to be "read" through the skin of the torso, envisaging silent messaging for cold war soldiers behind enemy lines, for example (see Parisi, 2018).

The promise of greater immersion through haptic bodysuits for entertainment purposes such as gaming or pornography has not worked out as planned. In 2000, the US media reported on a $170 bodysuit by Vivid Entertainment Inc.: a "neoprene cybersex bodysuit with 36 built-in sensors" according to Hartigan in the Boston Globe (6/2/2000:C1). More recently, the Teslasuit in development for training and entertainment purposes uses a mixture of electro muscle stimulation (EMS) and transcutaneous electrical nerve stimulation (TENS) "to simulate a range of real-life feelings and sensations" (teslasuit.io, 2022). Despite marketing hype and coverage at consumer electronics shows, the Teslasuit is currently only available as a developer kit, not yet to general consumers. From a brief encounter with the suit, Parisi (personal communication) confirms that the electrical stimulation in combination with visual cues can add something to make simulating the recoil of a firing weapon more convincing, and can be forceful, as when being hit by an in-game projectile. Having been long out of reach to consumers, the promise of full haptic bodysuits remains persistent in popular culture, as represented recently within the book and film *Ready Player One* (Dir. Spielberg, US, 2018).

Yet my sensory fieldwork in 2000 included one of the pioneers of Virtual Reality artwork in the 1990s, Norwegian artist Ståhl Stenslie, who had co-created his own custom haptic bodysuit for an immersive artwork called *Salve et Coagula* which premiered at the Dutch Electronic Arts Festival (DEAF) in 1996. The suit included what he called "vibro-tactile effectors" sewn in on the torso and aligned with the limbs, controlled with a custom printed circuit board (PCB), which he showed me and let me try (see Figure 5.3). Although no longer plugged in to the Silicon Graphics workstation which rendered the 3D scene, Ståhl told me that the bodysuit wearer interacts with a series of lively virtual alien creatures with tentacles, and the rippling effects produced through the sequential activation of vibro-tactile effectors accompanied the visual depiction of tentacles wrapped around the user. For this, he created what he called a "body map," unfolding the three dimensions of the body surface into a two-dimensional plane on paper for the purpose of visualizing the optimal placement of the 120 vibro-tactile effectors. By experimenting with these paper-based body maps, what he called a "tactile matrix" could be programmed, distinct patterns of activation of the vibro-tactile effectors around the body, in certain sequences and with different electrical strengths. As a result, he and his engineer collaborator found "some complex tactile sensations, like 'push–pull' and textures" (Stenslie, interview 19/09/2000), the "push–pull" being his term for the sensation of a whole-body feeling of being drawn in or pushed out by the virtual creature. Ståhl showed me still photographs of particular moments in the 3D VR installation, and for one photograph he pointed to his screen at an image of the computer-modeled "creature" that the user merges

Figure 5.3 A never-before published photograph of the author wearing Stenslie's bodysuit during a research visit to Oslo, 2000. Author's photograph.

into as the 3D installation reaches its culminating moments, and gave some sense of the relative strength in electrical power of the effectors:

> This is where you really *realize* virtual sensations. This [creature] has to . . . it can't actually influence you, [but] in [a] tactile way it can kick your ass! It gives you the user a different side of virtual reality, *sensing* the virtual, not just seeing it, or hearing it, but *sensing it*.
>
> *(Stenslie, interview 19/09/2000)*

Given the variety of different technologies and applications described earlier, encompassing medical simulation, virtual artwork, and entertainment contexts, decisions are to be made about the lens or framework through which the sensory ethnography is written. Deadlines for the doctoral dissertation entailed a pragmatic approach initially, with the analysis and use of interview data being a key feature, putting novel experience primarily in the words of interviewees and focus groups. Considerably fewer examples of sensory ethnography were available to draw inspiration from in the early years of the millennium. With the benefit of time to reflect more fully upon the first-person experience, and as the ethnographic work was developed more fully for different academic publications, came the opportunity to further develop and refine concepts which underpinned the sensory experience. Keywords which came up repeatedly in interviews or in the engineering or marketing literature such as "presence" in haptics and virtual reality, or "immersion" as noted earlier with bodysuits, for example, could be critically explored and problematized, hence the title of my article "'Feel the presence': The Technologies of Touch" (Paterson, 2006). There is no shortage of such buzzwords in recent decades, but a deeper historical perspective offers more durable concepts that can be applied to the perturbations of the sensorium, the sensory disruptions of experience through innovations in industry and technology. What follows therefore is a more historically contextualized discussion of some concepts that apply to disruptions in the habitual sensorium, and indicate ways that novel forms of perception, either with or without technologies, become interiorized over time. The following section therefore might offer some inspiration in terms of concepts and frameworks to interpret empirical data, but its purpose is also to indicate a wider historical context in which the very idea of novel sensations has been a long-running fascination which only accelerates in industrial societies and the era of modernity.

Getting a grip on new sensations

Sensory ethnography, like any other form of ethnography, is always conducted through a particular lens of the investigator's experience. It requires a viewpoint or perspective informed by a concept, the way the experience is potentially diffuse or diffracted, and then refracted, reassembled, and ultimately re-presented by the imposition of that experiential lens for the reader. The same data of sensory experience could be interpreted by the investigator in very different ways, and so there lies an ambiguity at the heart of this process wherein it could always be analyzed, refracted, and re-presented otherwise.

The sensations described earlier also enjoy an ambiguous relation in another way, being novel in certain situations yet often deeply familiar within our own embodied experience. Something of this ambiguity is present within the long-held fascination with the articulation of novel sensations in urban modernity by means of descriptive prose through such figures as Walter Benjamin in Paris and Georg Simmel in Germany. One thing that accompanies the industrialization of the modern body in the late nineteenth and early twentieth centuries that can be recognized from previous sections is the reshaping of the sensorium, the experiential envelope which determines what can be felt or experienced privately as sensation in the first place. The sensorium is not limited to the straightforward model of the five senses. In the rapidity of change symptomatic of urban modernity, Walter Benjamin acknowledged both the mediated and collective aspects when he observed: "technology has subjected the human sensorium to a complex form of training" (2007, p. 191). Exposure to external factors, environments that become

rapidly industrialized and mechanized, helps shape the sensorium and dampens the reactivity of the nervous system.

The technologies Benjamin was referring to could include the profusion of traffic lights in major cities, leading to new habits of pedestrian movement and awareness, or the advent of rapid forms of travel such as the motorcar or train. For Wolfgang Schivelbusch (1986), the historian of European modernity, the idea of "railway spine" and then neurasthenia was a convenient diagnostic catch-all for a number of nervous ailments that stemmed from the then-new experiences of traveling in carriages on the railways, for example. There is no shortage of noted contrasts in the literature of the time on the transformation of modes of travel being simultaneously a transformation of the sensorium, so that the speedy industrial machinery of the steam locomotive, and then the motorcar, could be contrasted with the more gentle, and supposedly more synesthetically and supposedly "natural," sensory qualities involved in the hitherto habitual activity of riding a horse (Schivelbusch, 1986, p. 55), say.

Likewise, in her analysis of literary modernism, Sara Danius describes the way that sensory technologies have gone from *prosthesis*, that is, the "essentially external relationship between the senses and their technological supplements," to *aesthesis*: the "interiorization of technological modes of perceiving" (2002, p. 194) within contemporary modernist literature. Marcel Proust's little-known 1907 essay for *Le Figaro*, "Impressions de route en automobile," for example, shows the author's fascination with the way speed alters perception. In a rapid road trip to Caen with a passenger, in the article Proust recounts his impressions through the windscreen and so, as Danius puts it, the motorcar becomes a "cinematic framing device on wheels" (2002, p. 95). Likewise, what Schivelbusch calls "panoramic perception," where the traveler saw the objects and landscapes "*through* the apparatus which moved him through the world" (1986, p. 64), and where the foreground disappeared in a blur, became normality. The fascination with speed and the framing of the passing landscape derives from what Danius considered an "external" relationship between the senses and technology which nevertheless ends up altering the subject's perception. This is where two further ideas from Benjamin can help us in a sensory ethnography of novel sensations, *aura* and *mimesis*.

Aura: spatiotemporal presence of an object

First, then, aura. Benjamin's famous essay of 1935 "The work of art in the age of mechanical reproduction" defines the notion of aura and laments its loss in the endless reproducibility of mass media via photographs, print, and cinema. Benjamin's thesis is that mass society demands such reproduction, despite the inevitable loss. "The desire of the contemporary masses to bring things 'closer' spatially and humanly," he says, is matched by their desire "toward overcoming the uniqueness of everyday reality by accepting its reproduction" (2007, p. 223). The proliferation of reproductions, copies, or facsimiles of artworks and objects through various media undoubtedly increases their availability and accessibility to the public, with digital reproducibility increasingly substituting for mechanical reproducibility in recent decades. What the public understandably clamored for, the accessibility and proximity of artworks and objects in their everyday life through the technologies of reproduction, ends up diminishing the unique qualities of the original objects, erodes their aura. Yet this very process also enhances the perception of authenticity of the original artwork or object. Think of the many reproductions of Edvard Munch's "The Scream" (1893) on tea towels, mugs, posters, and its circulation in meme form. None of the many reproductions retain the original's auratic presence, but on beholding the

original framed painting at the Munch Museum in Oslo, its unique presence enhances the perception of uniqueness, of authenticity.

There is more to Benjamin's concept than reproducibility, there is also the factor of *presence*, and the possibility of presence at a distance. As noted earlier, this concept was central to an early paper of mine based on ethnographic fieldwork with haptic technologies (Paterson, 2006), but here I wish to elaborate a little. For Benjamin, integral to his formulation of aura are notions of spatiotemporal presence and distance. The "aura of natural objects" Benjamin defined as "the unique phenomenon of a distance, however close it may be" (2007, p. 222). In other words, the aura of an original artwork or material object, like Munch's "The Scream" in Oslo, "is its unique existence at the place where it happens to be" (2007, p. 220), that is, a unique spatiotemporal existence which vanishes when the artwork or object is mechanically or virtually reproduced. "The situations into which the product of mechanical reproduction can be brought may not touch the actual work of art, yet the quality of its presence is always depreciated" (2007, p. 221), is how Benjamin puts it. What of the reproducibility involved in digital simulation, of haptic qualities created which mimic an original object but are not in fact direct copies or facsimiles of them? The digitally re-created flesh in the hypodermic needle simulation of ReachIn only needs to be good enough for medical training purposes. Digitally recreating the surfaces and textures of a Bernini sculpture through haptic and visual collocation would be a poor substitute for experiencing the real thing, however, and any auratic properties according to Benjamin would obviously be largely absent. Further arguments about Benjamin and digital reproducibility in this vein have been explored, but some tend to push back against his arguments about authenticity and the uniqueness of spatiotemporal presence. For example, in her essay on telerobotics, Marina Gržinić suggests that such technologies offer "a way to *restore* the aura, to restore the sense of time and place that the image conveys" (2000, p. 220, emphasis mine). Likewise with literary scholar Gabriel Josipovici who argues, *contra* Benjamin: "Aura does not abolish distance . . ., *it brings distance to life*" (1996, p. 10, emphasis mine).

Accomplishing some form of physical presence of an object over a distance is known as telepresence, and some haptic and visual technologies are clearly geared toward this end of bringing a distant object to life, and of manipulating it. As Lev Manovich describes it, telepresence involves "representational technologies used to enable action, that is, allow the viewer to manipulate reality through representations" (2001, p. 165). One of the catalysts for studying the PHANToM in the first place was news in 2002 of a transatlantic "virtual handshake" of two of these haptic devices, one based at MIT in Boston and the other at UCL in London (Arthur, 2002), in which a computer-modeled squishy ball was manipulated and passed between devices connected through the internet. In that case, what was notable was the accomplishment of a modest task in real time over a distance, as opposed to any notions of the particularity or fidelity of modeling an object, or any concerns about aura or its lack.

More broadly, what can aura and auratic properties mean for sensory ethnographies? It is a truism that much of our lives are spent online and that screens are omnipresent. However, as more research is conducted through digital technologies, including online questionnaires, interviews through Zoom, focus groups conducted through Facebook, or using videography to try to convey the unique character of a place and one's embodied experience of it (Paterson & Glass, 2020), and so on, the auratic lens is no longer limited to the objects of study, that is, the digital reproducibility of sensations by engineered means and the need to bring those sensations into proximity with the user. Instead, this can be widened out to encompass

the digital nature of the medium through which the research is conducted, where, for example, the relative flatness of the computer screen compresses a number of sensory channels through which we interact with others to merely an audiovisual digital stream. Whether or not there is a literal "hands on" primary encounter with research objects, or a face-to-face in-person meeting with research subjects, sensory research is increasingly conducted and disseminated through digital means, and is thereby digitally reproducible. One particular challenge for sensory ethnography, in other words, is how to convey what is assumed to be sensorily immediate, that is, directly experienced by the researcher, through such digital media.

Mimesis: the production of sensations

Second, then, mimesis. Benjamin's discussion of the mimetic faculty, and the anthropologist Michael Taussig's subsequent discussion of "mimetic machines" that provide a "new sensorium" (1993, p. 24), thereby affecting the nature of experience, is a straightforward departure point for this discussion of sensory technologies, although it is important to clarify that mimesis never aims for perfection in its reproducibility. As Andrew Murphie notes, mimesis is not representation, it "is always first and foremost a form of production" (2002, p. 193). Production rather than reproduction, we might emphasize, is significant given the usual engineering and marketing rhetoric about fidelity in recreating sensory experience. Following Danius's distinction, the corollary of the relations between technology and the senses being external, whether a railway carriage, an artwork, or a haptic device which digitally and mechanically *produces* sensations of proprioception and touch, is an alteration in the "interiorization of technological modes of perceiving" (2002, p. 194), this being at the heart of the sensory ethnographic project. Any recreation of an existing material object within a new medium, in this case through visual and haptic technologies, becomes itself an articulation of this new way of seeing. The object of study shifts from the technology and its material instantiation, with its assortment of force feedback motors arranged to operate across spatial planes, to what is *produced* in the process of interaction with it, that is, the recreation of the sensorium through other means: the "feel" of a handshake, say, or the extrusion of a needle from skin, rather than the device and its assemblage of motors and screens.

Again, this phenomenon is nothing new in itself. The ability to re-create a series of sensations through technological means always exerts a fascination upon the reflexive subject. Schivelbusch gave the example of a new fascination with previously unobserved details in early photography. It was novelty enough at first to represent any object through this new medium, wrote Buddemeier, but "the question arises: why did the exact repetition of reality excite people more than the reality itself?" (in Schivelbusch, 1986, p. 63). This is a key question regarding the motivation to model and re-create the sensory properties of objects through other means, as if the technology itself eclipses the salience of its recreations. In early photography, for example, acts of seeing became invested in new significances, and there are stories of fascination with the visual reproduction of detailed brickwork as much as with the capturing of facial expressions and family portraits, the realm of the mundane persisting despite the apparent transformation of the sensory world through technology. Quite apart from any shortfall in Benjaminian aura, the reproduction of any textured object through technologies, no matter how well an original object is scanned, modeled, and then represented onscreen and through high-fidelity haptic devices, may appear visually accurate but can only ever approximate limited aspects of our full-bodied experience. This is the case

with a range of sensory technologies, from the ReachIn Desktop which opened this chapter to the more full-bodied haptic bodysuits discussed in a proceeding section.

Following the emphasis on mimesis, then, haptic technologies could be interpreted and translated into the realm of the observer's own bodily situation in terms of *production* rather than reproduction, along with any associated assumptions about fidelity or accuracy as such. Even imperfect production of sensations can still enhance operations, provide richer experiences for the user or operator, or promote experimentation through free-flowing play and creativity. With this mimetic focus on production, synthetic sensations like the haptic technologies discussed here create a set of forces and sensory impressions. For the goal of any human–machine interface is not about fidelity as such, but rather the accomplishment of a task. The addition of haptics can provide a richer sense of the "direct manipulation" of objects, in Johnson's words, where "the user makes things happen in an immediate . . . way" (1997, p. 179) in pursuit of that task.

Mimetic sensory properties enhance the sense of the user being engaged upon the task at hand. In the pursuit of re-creating the right "feeling," my sensory ethnography was not an STS-style investigation of the science and engineering processes themselves, but by putting together interviews with my own first-person experience, this early twenty-first-century research project began to open up how assemblages of "feeling" become retro-engineered, integrating the perspective of the user with engineers, coders, designers, artists, and testers, rather than being arbitrarily imposed or naively coded by programmers. Following Benjamin's idea of mimetic machines producing a "new sensorium," at the heart of mimesis is not just the production of the same, but rather the engineered incorporation of variation to make the user feel some measure of fidelity. This whole process of engineering sensory fidelity can be analyzed in Scheichner's words as a "performative experiment" that "encourages the discovery of new configurations and twists of ideas and experience" (in Thrift, 2000, p. 221). Benjamin's particular formulation of mimesis is helpful for sensory ethnography in that, like aura and presence from the previous section, it further separates the researcher from the buzzwords of engineering and marketing, which naively but understandably wish to stress the accomplishment of sometimes startlingly life-like sensations through combinations of hardware and software.

In sum . . . getting a grip on the empirical material

What have we learned so far about sensory ethnography, and how might this be operationalized or adapted for other sensory technologies? The first section, "Reaching in and touching a virtual object," offers a subset of sensory technologies, and identifies some issues in writing coherently about somewhat disparate technologies and fragmented experiences. The second section, "Getting a grip on new sensations," introduced the idea of adding a conceptual lens on that experience, and offered examples from the historical literature that may still find application to new and emerging technologies. My suggestions were not prescriptive, of course, but meant as an invitation for the sensory scholar to consider revisiting venerable literature, in this case in cultural and critical theory, to add continuity and historical perspective on the rapidly changing sensorium.

The previous section's invocation of aura and auratic properties, of mimesis as usually imperfect (re)production, may give the impression of imprecise, fragmentary, and fleeting sets of sensations that were extraordinarily difficult to describe through conventional academic language. It so happens that, around the same period that I was wrestling with conceptual

and empirical issues around the new digital sensorium, a distinctive texture of research in the social sciences was emerging known as non-representational theory (NRT) or more-than representational theory, and offered new ways of engaging with the body and senses, including through the commodification of experience, prelinguistic intensities, affects, and the role of performance. Key for research involving the body was the acknowledgment that background embodied or precognitive realms may not always be straightforwardly amenable to conscious reflexivity and representation, and so the contingency and unpredictability of behaviors and practices necessitated more creative and open-ended empirical approaches. In their influential collection on NRT, for example, Anderson and Harrison (2010, p. 8) acknowledge the role of my empirical work on technologies of the senses in the early days. They situate my work among others who showed "concern for the practical, embodied 'composition' of subjectivities," where subjectivities emerge "from the active, productive, and continual weaving of the multiplicity of bits and pieces" (2010, p. 8), of practices and performances.

In what remains, I briefly indicate a series of ongoing connections between the research on novel sensations I have exemplified earlier and the lively ongoing endeavor of non-representational theory, and especially its attention in recent years to the empirical. Referring to a strand of NRT that he has been particularly active in developing, Phillip Vannini (2014, p. 318) argues: "Non-representational ethnography in particular attempts to grapple with the challenge of sharing empirical narratives that make sense . . . while simultaneously underscoring the situatedness, partiality, contingency, and creativity of that sense-making." Vannini sees this as historically consistent with more creative approaches to rich description and, against the traditional ethnographic "know and tell" model of qualitative research, identifies five elements that are influencing non-representational ethnography: vitality, performativity, corporeality, sensuality, and mobility.

Combinations of these elements are being explored especially in recent human geography, for example, in my examination of a reflexive, kinesthetic hapticity and what I call "sensuous dispositions" within ethnographic fieldwork (Paterson, 2009) and the idea of the ethnographic body-in-place (Paterson & Glass, 2020), as well as in David Bissell's (2012) work on habit and movement, or Paul Simpson's (2008) work on street performance. In ethnographies of new media, including the quotidian sociality involved in using touchscreen devices in the home, Ingrid Richardson and Larissa Hjorth speak of "kinetic materiality" (e.g., Hjorth & Richardson, 2014; see also Pink et al., 2016; Richardson & Hjorth, 2017). These, and more recent examples such as the place of the body in heavily automated settings (e.g., Lin et al., 2022 on dispositions in airports; Paterson 2021 on bodies in factories), take up the challenge of the fragmentation of experience, the incompleteness of subjectivities, the indeterminacy of bodily and sensory boundaries, and the role of technologies and objecthood in this.

The promise of the increasingly multimodal human–computer interface (HCI), as we saw, is occurring within haptic devices, controllers, bodysuits, videogames, VR, and even so-called 4D cinema (powered by companies like Montreal's D-BOX). Alongside the usual visual spectacle, non-visual channels of communication and richly embodied interactions are being established by means of haptics and rumble, the tracking of bodily movements and rhythms (cameras and sensors on headsets and handheld controllers), available through the machinic interpolation of gesture and movement, lend themselves to more creative non-representational ethnographic interpretations, as the background hum of precognitive rhythms and responses spills out, or bleeds into, habituated practices and embodied skills. Shifting the

focus from the immediacy of embodied sensory experience that characterized my empirical research, however imprecise or fragmentary, to the use of objects among groups of people in social settings offers exciting possibilities to advance sensory ethnography through non-representational means. For example, Hjorth and Richardson (2014) observe how taking turns, passing controllers and touchscreens between friends or lovers, become a means of "being-with others," where sensory interactions with technology can be involved in the maintenance of relationships. Especially since the devastating social isolation and touch deprivation involved in COVID-19 lockdowns, we have become acutely familiar with the use of technologies in the ongoing management of co-presence, both online and in-person in the same spaces.

The prospect for sensory ethnographies which further articulate ever more richly embodied individual interactions with technologies is exciting. But widening the focus to consider the ways that various combinations of controllers, screens, bodysuits, and devices have become folded into a distributed set of bodily habits, movements, and repertoires that altogether furnish social relations and help foster accomplishment, what Hubert Dreyfus (2000), after Merleau-Ponty, termed "grip," is where non-representational methods can push farther into that social and technological context. To conclude both this section and the chapter, what a non-representational or more-than-representational sensory ethnography can do, in other words, is to underline the positionality and particular perspective of the scholar, and to acknowledge that the conceptual lens they employ for further analysis is contingent and will only ever lead to a partial reconstruction of sensory fragments and memories. None of this is radically new in itself. The non-representational follows in the footsteps of any decent ethnography or social study of science or technology in recent decades, for one. It can be situated in a longer historical arc of charting the disruption of the habitual sensorium, as I showed in the second section, for another. However, the more exciting promise of bringing the non-representational and the empirical together is the opening up of more creative and imaginative forms of engaging with novel sensations and then representing them with the limitations and advantages of each medium in mind.

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6

SENSORY DEGRADATION AND SOMATIC LABOR

Critical sensory ethnography for hypermodern times

Simon Gottschalk

In this chapter, I combine scholarship on the senses, sensory ethnography, and hypermodernism to present several arguments about sensory degradation, somatic labor, and the role of a critical sensory ethnography for the present moment. I first discuss three sources of sensory degradation and then review some innovations and challenges of sensory ethnography. In the next section, I propose the concept of *somatic labor* as a lens that could inform critical sensory ethnographic projects. In the conclusions, I discuss some research topics for such an ethnography and discuss its relevance for the present moment.

Sensory degradation

Sensory degradation refers to a decline in the quality, variety, and integration of sensory experiences. I use the concept of degradation rather than close synonyms, such as degeneration or deterioration, because degradation both refers to a reduction in the quality of something and—when applied to humans—also evokes an emotional and interpersonal dimension. While there are many sources of sensory degradation, I am especially concerned in this chapter with (1) sensory confusion induced by deficit, substitution, and excess, (2) acceleration of everyday life, and (3) interactions with digital devices. Those three sources are, of course, not exhaustive and interact in complex ways. They permeate leisure and professional activities, interpersonal and intrapersonal experiences, and conscious and subconscious levels.

Sensory confusion by deficit, substitution, and excess

"I am getting a faint taste of a basil leaf, but that's about it," I tell my wife, a little panicked. In August 2021, just a few days after we moved back to California, we both contracted the COVID-19 virus. Fortunately, we were vaccinated and the symptoms were not too severe. We developed a high fever, coughed and sneezed a lot, stayed in bed for a couple of days, and quarantined for ten. The most disorienting symptom was the complete loss of taste and smell, which lasted for about a week. I distinctly remember that the last taste I savored was a basil leaf in a pho, left on our front porch by a young and masked food delivery worker. His

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company flyer promised "no contact." After that liquid meal, my senses of taste and smell completely disappeared. Coffee tasted like sweet hot water, soup tasted like salty hot water, and soaps, shampoos, deodorants, toothpaste, and colognes did not smell like anything at all. Suddenly, a rich and taken-for-granted world of enchanting fragrances and tastes vanished, to be replaced by the odorless and the flavorless. Troubled by various news articles and TV stories, I contemplated what life would be like should my senses of smell and taste disappeared forever. And since "the memory of one sense is stored in another: that of tactility in sound, of hearing in taste, of sight in sound (Seremetakis, 1994, p. 28), I was also concerned about whether this sudden malfunction in those two senses could compromise not just memory but other cognitive aptitudes as well. Although mercifully temporary, this experience of sensory loss, which befell millions of people worldwide (Tullett & McCann, 2022), coincides with more gradual changes occurring at the biographical level. I am now 63 years old, almost a senior citizen, an age when the senses of smell, hearing, sight, taste, touch, proprioception, balance, and others begin to decline. This process inevitably shapes one's emotions, thoughts, perceptions, interactions (Heine & Browning, 2002), and hence, one's experiences of everyday life.

Historians, social scientists, and others have convincingly documented that transformations in culturally sanctioned sensory experiences also occur at the macro level. Those can be caused by natural forces or motivated by political, economic, ideological, and other ones.

In the realm of food, for example, Claude Fischler advances the concept of "gastro-anomie" to explain that

> many of the food items routinely purchased may be perceived as having unknown features or unknown ingredients, with a consequent loss of the consumer's confidence. This effect is reinforced by the fact that modern food manufacturing techniques, including the use of synthesized substances and flavourings, can imitate or conceal "natural" textures or tastes, leaving the consumer effectively unable to trust the sensory messages given off by any given food product as a reliable guide to its actual nature.
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> *(1988, p. 289)*

In the contemporary hypermodern moment, the rapidly expanding and diversifying practices surrounding food production, preparation, presentation, delivery, and consumption are redefining not just the physiological significance of eating, food, and taste, but its cultural, political, and economic meanings as well, at a global level (Edensor & Falconer, 2015; Gottschalk, 2008; Ritzer, 2007; Seremetakis, 2021).[1]

The diminishing opportunities to engage with naturally occurring sensory signals are both aggravated and soothed by their substitution by artificial ones. For example, as genetically modified "natural" foods like fruits and vegetables lose taste and flavor (but keep perfect shape and color for a surprisingly long period), scientific labs and commercial enterprises are increasingly producing food compounds that—we are promised—taste "Just Like Chicken," "Just Like Beef," and similar variations. While efforts to reduce meat consumption are certainly laudable and urgent, confusion about gustatory messages must necessarily undermine one's sense of efficacy and knowledge about what is healthy and what is toxic. And since knowledge about such matters is central to one's existence, it does not seem unreasonable to suggest that this trend in the domain of taste "naturally" contaminates other sensory ones. Olfactory experiences, for example, meet a similar fate, as televised commercial ads normalize the substitution of naturally occurring fragrances with chemical compounds. Thus, *Glade*

offers air fresheners that smell like a "Hawaiian Breeze," "Tranquil Lavender," "Exotic Tropical Blossoms," or "Lemon Fresh." *Renuzit* presents "after the rain," *Clorox* offers "fresh winter pine," and *Airwick* touts "apple and cinnamon." At the gym, rows of perfectly aligned stationary bikes, treadmills, rowing machines, stair-masters, and other contraptions replicate this trend in material forms as well. The multimodal experience of locomotion in space, which typically includes composing with the environment through which one moves and with those who populate it (Allen-Collinson & Hockey, 2015; Wylie, 2005), is reduced here to motions on smooth rubbery surfaces, in a controlled, air-conditioned, and artificial environment. If these motions neither cover any ground nor lead anywhere, they can be precisely personalized and obsessively measured.

Confusion about gustatory, olfactory, kinesthetic, and other sensory signals coincides with the accelerating destruction of the natural environment, the extinction of the rich variety of organisms that populate it, the disruption of its weather patterns, and of other natural phenomena that have always informed sensory experience and intelligence. For anthropologist Abram, those ecological traumas can compromise our very linguistic capacities:

> As technological civilization diminishes the biotic diversity of the earth, language itself is diminished. As there are fewer and fewer songbirds in the air, due to the destruction of their forests and wetlands, human speech loses more and more of its evocative power. For when we no longer hear the voices of warbler and wren, our own speaking can no longer be nourished by their cadences. As the splashing speech of the rivers is silenced by more and more dams, we drive more and more of the land's wild voices into the oblivious of extinction, our own language becomes increasingly impoverished and weightless, progressively emptied of their earthly resonance.
>
> *(1996, p. 86)*

In addition to the diminishing opportunities to engage with naturally occurring sensory signals and to their substitution by artificial ones, a third source of sensory confusion is the attention one must grant the excess of sensory stimulations that disrupt everyday life and consciousness in hypermodern times. While the notion of excess might seem to contradict that of deficit discussed earlier, the latter concerns natural sources of sensory experience, and the former concerns commercial, technological, and ideological ones.

Hypermodern scholars explain the current moment as a disorienting "collusion between the temptation toward excess and the means to achieve it" (Cournut, 2005, p. 64). Meeting neither resistance nor alternatives, the logic of excess and intensification "is noticeable in the arts, in religious fundamentalism, in the spheres of production, of administration, and of the management of cultural activities" (Tapia, 2012, p. 19). As Claudine Haroche explains, hypermodern society refers to a social system and era where "uncontrollable technologies . . . seem to modify perceptual and sensory functioning at a profound level" (2011, p. 81). Mobilized by the ideology of constant and instant hyper-hedonism, the functions of the senses are reduced to channels of intensified and individualistic pleasure. For example, in televised commercial ads, an iPod does not just stream high-fidelity music into a teenager's ears; it makes her dance with complete abandon. A cologne does not just smell like sandalwood; it unleashes wild eroticism on a deserted beach. A car is not just comfortable; it makes hills shake and flowers bloom. A deodorant does not just release a chemical *Ocean Breeze*; it transforms a suburban

patio into a lush tropical garden. Even the material commodities consumers are urged to purchase:

> [M]ust do more than just function efficiently, they must awaken sensual pleasures, offer a high-quality sonic or olfactory experience, or provide a more pleasurable tactile one. . . . The logic is to suggest function while increasing the commodity's alleged qualities or the sensory.
>
> *(Lipovetsky, 2006, pp. 210–211)*

In the hypermodern realm of the senses, enhanced and technologically engineered sensations replace sense-making (hence, thinking), the sensational displaces the sensical (Barus-Michel, 2005, p. 242), and individuals confront a "loss of the senses" and "senselessness" (Aubert, 2005, p. 28).[2]

In concert, the diminished opportunities to engage with naturally occurring sensory signals, their substitution by artificial ones, and technologically engineered sensory excess confuse the functioning of the sensory apparatus. As a result, we might become less reliant on our disoriented sensory skills, less intelligent about them, less confident in their use, and therefore likely to activate them more hesitantly as we go about our daily lives and try to "make sense" of the signals we notice, ignore, or mistake.

Acceleration

Like thermoception, spatial perception, proprioception, the vestibular sense, the sense of pain, pleasure, and others, chronoception—the sense of time—is typically not listed together with the five traditional senses. Whether chronoception should be simply added to those five or assigned a different position in the sensory apparatus is uncertain, as it relates to them in complex ways. Sensory experiences always occur in particular places and at particular times. Those times can be scheduled or unexpected, they can last for excruciatingly long, be much too short, or be just right. They can occur too frequently or too rarely. We experience time collectively and subjectively; how we do so is culturally sanctioned, context-dependent, and often fashioned by purposeful and creative action (see Flaherty, 2002, 2003). Like all universals, time is a social construct; different societies and eras have created rich and varied discourses about it, and have structured it in their distinct fashion (Zerubavel, 1982, 1985). From the Mayan calendar to the atomic time clock, the societal structuring of time has been motivated by astral patterns and environmental changes, but also by economic, political, religious, ideological, and other interests. As a result, this structuring can also lead to social conflicts (Rifkin, 1989).

For hypermodern theorists, one key characteristic of the present moment is a seemingly uncontrollable acceleration, which Hartmut Rosa (2010, 2013) locates in the three interrelated societal spheres of technology, institutions, and subjective experience of everyday life (see also Ascher, 2007; Aubert, 2005, 2006, 2018; Cournut, 2005; Gottschalk, 1999; Hassan, 2009, 2012; Tissier-Desbordes, 2018). When the social institutions in which we participate accelerate, we must move faster just to keep pace, as moving at what used to be a "normal" speed is now too slow. To accelerate, we must accomplish tasks faster, perform several tasks at once, or take less time between them. Acceleration is typically studied in the sphere of work, but it contaminates activities that take place in other spheres as well. As we work longer hours, faster, and with fewer breaks, we have less time and energy to allocate to

activities that are essential for health-restoration and maintenance, family life, leisure, community participation, self-development, and others. Acceleration destabilizes our sense of time and our relation to it. We experience it as more compressed and immediate. As there seems to be less of it, we feel compelled to do more with it and fill it up with more activities (Bouilloud & Fournout, 2018).

Although normalized and even celebrated, acceleration is neither benign nor innocent. As a form of totalitarian power, it destabilizes institutional arrangements, erodes a stable sense of self, and leads to disintegration and detachment. Disintegration, because hurried individuals cannot integrate the various episodes of everyday experience into a holistic and long life-project. As a result, they become detached and disengaged from the times and spaces of their lives, from their experiences, from others, and from the material objects with which they live and work (Rosa, 2010, 2013).

As Rosa also points out, everyday life in hypermodern times is not solely propelled by an uncontrollable acceleration but is also destabilized by clashes between the unsynchronized temporal modes that drive different societal domains. Some of those (technology, for example) show vertiginous rates of acceleration while others (some bureaucracies, for example) seem static in comparison. We routinely experience these temporal misalignments in instances when the various environments through which we circulate are "out of sync" with each other and demand constant adjustment. At main US airports, for example, we are brutally rushed along the security check-in line and, a few minutes later, find ourselves paralyzed in the boarding area. Upon landing, we will be asked to quickly exit the plane, only to find ourselves immobilized moments later in the long line waiting at the immigration desks. Soon thereafter, in the passenger pickup area, we will be ordered not to waste any time greeting those who pick us up, and to quickly load our luggage in the open trunk. And while we might invent isolated acts of resistance to alleviate frustrating situations like temporal pressures or captivity (Flaherty, 2003), we still develop a certain submissive relation vis-à-vis those who control our time, who can order us to hurry up, slow down, or stop, and who can punish us when we disobey.

To Marx's alienation from work, commodities, self, others, and species-being, Rosa adds alienation from time.[3] Since time is an essential dimension organizing everyday life, an accelerated sense of time is an alienated sense of time that has real and measurable consequences. For example, Jauréguiberry's (2003, p. 2) research on French workers finds that the sense of urgency they experience at work is increasingly invading their private sphere. Unable to resist the time pressures imposed on them, many succumb to this sense of urgency by developing a "connectivity syndrome." Its symptoms include

> the anxiety of wasted time, the stress of the last minute, the constantly frustrated desire to be here and elsewhere at the same time, the fear of missing out on something important, the dissatisfaction of hasty decisions, the fear of not being connected at the right time on the right network, and the confusion resulting from an ephemeral information saturation.
>
> *(Jauréguiberry, 2005, p. 91)*

By both overstimulating and exhausting bodies and minds, acceleration compromises other sensory experiences as well. Concretely, it is difficult to see, hear, taste, touch, or smell with much mindfulness when one is moving at high speed. It is similarly difficult to do so when one is being constantly mobilized—mentally, emotionally, socially—in a state

of permanent urgency (see Aubert, 2018; Haroche, 2018; Jauréguiberry, 2018, for example). Such a state requires the immediate and focused attention of only those senses that are directly relevant to the situation at hand. Irrelevant sensory signals are summarily dismissed as just distractive "noise." For political scientist Laidi (2001, p. 533) also,

> [u]rgency translates itself as having a subjective relation to time. It expresses one's anxiety—or outright panic—when confronted with an immediate future loaded with uncertainty and risk. It is a state of emotional overload in which one is unable to evaluate oneself and one's situation in reasoned calm. This uncertainty is accompanied by anguish and often fear.

As hypermodern theorists such as Aubert (2003, 2008a, 2008b, 2018), De Gaulejac (2018), Haroche (2018), Jauréguiberry (2018), and others conclude, acceleration leads to burnout at one end of the continuum and depression at the other.

Interactions with digital devices

Spending about 95% of our lives indoors must also, at some level, degrade our sensory sensitivities and intelligence. This is especially likely as Americans spend more than eight hours a day—or about 40% of their waking lives—interacting with digital devices (Kemp, 2022). Hypermodern scholars assign those devices a central role in shaping social life, from the most macro to the most micro levels. Discussing the numerous and interrelated ways that digital devices do so is well beyond the scope of this chapter. Knowledge about this issue is constantly updated and often inconsistent. In light of the accelerated speed at which new digital devices are invented and adopted, it seems that by the time we have somehow begun to wrap our minds around how our interactions with them affect us, they have already morphed into new ones (Gottschalk, 2018). In addition, while our senses are activated in unique ways by our interactions with digital devices and with others through those devices, different devices have distinct affordances, and it is difficult to offer statements about the effects of our interactions with varied devices that would apply to all of them. As most people use those devices to go online and interact with others there, what follows in this section applies especially to those activities.

As key accelerators of the hypermodern moment, digital devices mostly engage the visual and acoustic senses, and simplify tactility to rudimentary contact with plastic keyboards, screens, mice, and joysticks.[4] Since sensory experience includes much more than the activation of a particular sense organ, this simplification of the sense of touch logically results in changes in the other senses, their organization, and integration. If, as Howes and Classen (2019, p. 25) remarked, the natural environment influences perception by calling for the use of some senses more and differently than others, the digital environment has a similar effectivity. Like physical environments, digital ones also overstimulate some senses, understimulate others, and simplify the activation of still others. In so doing, they re-wire our perceptual aptitudes, our sensory apparatus, and our very brain architecture (Carr, 2011). One major difference between the physical and the digital environment, however, is that the latter is a *represented* one. Places are represented as pictures, people are often represented as sounds, images, and texts, emotional reactions are represented as emojis, gestures are represented as a moving cursor, momentous actions are represented as seemingly benign mouse-clicks, etc. That this environment where we spend about 40% of our waking life has no physical

existence is consequential for other aspects of our existence than just the senses. As Abram (1996, p. 80) reminds us, meaning "remains rooted in the sensory life of the body—it cannot be completely cut off from the soil of direct, perceptual experience without withering and dying." In other words, when our sensory aptitudes are stunted and groundless, our social constructions become simplified and senseless.

In concert, sensory confusion, acceleration, and interactions with digital devices normalize the experience of sensory degradation. This experience, in turn, paves the way for *sensory amnesia* (Seremetakis, 1994, p. 9), a condition in which we do not only forget those sensory experiences, but also forget that we once knew them, could associate specific memories to them, and understood their meanings. And since the senses are so implicated in personal and cultural identity, the consequences of this amnesia extend well beyond individuals, as it erases a rich interplay of practices, spaces, people, interactions, values, social bonds, etc. (see Seremetakis, 1994, 2021).

Sensory ethnography: innovations and challenges

When our sensory experiences and intelligence become degraded, we might become less interested in cultivating or understanding them—academically or otherwise. As a result, being insufficiently trained to attend to this dimension in our scholarship and writing, we might mistakenly consider it trivial. Fortunately, as this volume attests, a growing number of scholars in the social sciences and humanities are increasingly turning their attention to the senses. Thanks to this scholarship, we can better understand that the deployment, organization, interpretations, politics, and effects of sensory experiences vary immensely across eras, cultures, mental and physical conditions, life stages, and other variables (Pink, 2009; Vannini et al., 2012). Examining a wide range of locations, periods, and topics, this scholarship does more than just evoking and interpreting sensory experiences. It also explains which sense matters, how, when, where, to whom, why, and with what consequences (see Gibson & Vom Lehn, 2021).

In *Doing Sensory Ethnography*, Sarah Pink notes that scholarly writing remains a "central and crucial medium for the description, evocation, argument, and theoretical debating of ethnographic research that attends to the senses" (2009, p. 132). Acknowledging that the written word is also "limited in its capacity to communicate about the directness of the sensory and affective elements of emplaced experience" (p. 135), she provides intriguing examples of the creative non-textual methods scholars have used to represent, explain, and sometimes evoke sensory experiences in readers (2009, 2010, 2011; Pink & Mackley, 2013). Thanks to existing technologies, many of these sensory multimodal ethnographies can be distributed as quickly as journal articles or books, and probably quicker. Soundwalks, sound recordings, videos, interviews, and other recorded sensory data can be digitized and made available to practically anyone who can access an internet connection (Stevenson & Holloway, 2017). Suggestions about how to look at or listen to the data can also be included as part of the ethnographic document (Vannini & Taggart, 2013). As a result, the evocation, presentation, and interpretation of sensory experience can become an open text, or perhaps better fittingly, a performance that invites participation. Readers of such texts and audiences of such performances can be invited to react to the material, in real time, and in conversation with researchers, participants, or other audience members.

While there is little doubt that ethnographers will continue to develop creative ways to evoke sensory experience beyond—and in addition to—the written text, they must resolve

(at least) three challenges. First, it is notoriously difficult to publish non-textual material in the main journals of our professions, as they are designed to almost exclusively host written texts that must be rigidly structured. This limitation is a bit surprising as most readers probably access the electronic version of our texts, a format that should easily and inexpensively enable the inclusion of visual, acoustic, and audiovisual material. Part of the problem can be attributed to (a) the paralyzing regulations that limit what scholars can do and publish whenever they conduct research with human subjects, and (b) the labyrinthic journey they must successfully navigate to avoid violating the copyrights laws that protect the wide variety of texts they find and want to include in their manuscript.[5]

Second, by seeking to better evoke specific sensory experiences, many sensory ethnographies tend to reproduce a fragmented view of these experiences. Concretely, by highlighting sound, sight, smell, taste, touch, or other senses, sensory ethnographies imply that senses can be isolated from others for purposes of evocation, analysis, and theorization. In so doing, they reproduce a problematic approach to the senses that hypermodernists and others have strongly criticized. In this approach, which is incidentally also normalized in commercial ads and other enterprises, the senses are detached from each other and become a collection of isolated organs/receptors that need evaluation, repair, and improvement, typically by purchasing a product or service (Vannini et al., 2012). In contrast, many scholars have long maintained that sensory experience is the synergy of all the senses, in movement, in context, and often in interaction with other people. It is integrated and holistic rather than organ-specific (see Stevenson, 2017, p. 557). Capturing, recording, processing, integrating, and interpreting this synergy is quite difficult to accomplish for oneself, let alone for others, and especially through writing.

A third challenge faced by sensory ethnography concerns the digitalization of sensory experience. Almost 60 years ago, French sociologist Jacques Ellul warned against the complete takeover of our cognitive functions by intelligent machines. According to his predictions,

> Knowledge will be accumulated in "electronic banks" and transmitted directly to the human nervous system by means of coded electronic messages. There will no longer be any need of reading or learning mountains of useless information; everything will be received and registered according to the needs of the moment. There will be no need of attention or effort. What is needed will pass directly from the machine to the brain without going through consciousness.
>
> *(1964, p. 432)*

Will sensory experience meet the same fate? In light of rapid development in the capacities, responsiveness, and (artificial) intelligence of technologies of simulation and immersion (Turkle, 2009), it is likely that they will soon be able to produce the whole gamut of sensory experiences, and even invent new ones. Such technologies will be able to simulate—for example—the experience of jogging on a beach on a summer afternoon. It will combine the briny smell of the ocean and of wet algae, the *sensurround* sounds of squawking seagulls and crashing waves, the feel of bouncing feet on soft sand and cold water splashing on ankles, the sight of clouds drifting across a technicolor blue sky and of sandpipers racing after the receding tide. In addition, those technologies will not just simulate personalized sensory experiences but will also record, store, and analyze them at a most granular level while streaming them "live" to friends, followers, and analysts.

On the other hand, although simulation and immersive technologies might be able to perfect the digitalization of sensory experiences, the resulting "program" cannot weave in the intricate web of affective, cultural, and biographical associations that characterize human sense-making. In some sense, both virtual reality software designers and (some) sensory ethnographers are pursuing the same goal, which is to evoke sensory experiences. The software designer does so by encoding them in a digital language; the sensory ethnographer does so by encoding them in the language of everyday life, and sometimes complements the written text with sound recordings, video clips, images, music, and other media. But while texts seek to evoke sensory experience by prompting empathy, cognitive engagement, and imagination, digitalization delivers embodied sensory experience via direct stimulation, simulation, and immersion. Accordingly, since digitalization might soon provide users with a more direct and visceral sensory experience than written texts, it might be useful to reflect on the goal of evocative writing and multimodal composition about the senses in the hypermodern moment.

Somatic labor

While it is safe (and optimistic) to assume that humans will adjust to contemporary conditions of sensory degradation and will devise creative ways to compensate for their effects, it is also important to acknowledge the immediate costs of doing so. As an example, two individuals engaged in a casual conversation will naturally speak louder to be heard against the roar of a plane flying overhead. Nevertheless, this seemingly simple adjustment translates into strain on the speaker's vocal cords and the listener's eardrums. And since physically co-present actors who are engaged in a casual conversation rarely speak loudly to each other, one should also consider how this seemingly simple adjustment to a deafening noise sets the general tone and tenor of that conversation. As another example, residents of a small Tennessee town who are forcefully exposed to putrid smells emanating from a waste management facility nearby must now affix plastic over windows and thresholds, duct tape around the seals of doors, ensure that every little crack and vent is stuffed with something, completely wrap their house with a skirt of heavy plastic, and carry canister gas masks when they venture outside (Dhillon, 2022; Powell, 2021). As yet another example, Malibu surfers must now regularly disinfect their skin because of rashes caused by polluted water, and rinse body cavities with hydrogen peroxide to avoid infections (Navarro, 2007). Interactions with digital devices also enforce their own adjustments, and users are urged to protect their eyes against blue light (Harvard Health, 2020), correct wrist position while typing to avoid carpal tunnel syndrome (Rempel et al., 2008), align sitting position to their screen to avoid "tech neck" (Kuznits, 2023; Riew, 2023), or resist the impulse to touch their legs when they experience the phantom pocket vibration syndrome (Rosen, 2013).

These activities and myriad others constitute *somatic labor*. This notion is inspired by Waskul and Vannini's concept of somatic work, which they define as follows:

> [A] diverse range of reflexive, symbolic, iconic, and indexical sense-making experiences and practical activities [through which] individuals produce, extinguish, manage, reproduce, negotiate, interrupt, and/or communicate somatic sensations to make them congruent with personal interpersonal and/or cultural notions of moral, aesthetic, or and/or logical desirability.
>
> *(2008, p. 5)*[6]

As a distinct category of somatic work, somatic labor refers to a diverse range of reflexive, symbolic, iconic, and indexical sense-making experiences and practical activities that individuals perform *to manage sensory degradation and threats to sensory integrity*. Like somatic work, somatic labor can be prompted by naturally occurring events, by technologies, by physically co-present others, or by invisible, distant, and anonymous entities, such as bureaucratic organizations. Sensory degradation and threats to sensory integrity can be intentional, incidental, or accidental to the operations and decisions of those organizations and the individuals who work in them. The necessity to perform somatic labor can be urgent, incremental, or delayed. It can be new and recently imposed or rooted in traditions and long-established social arrangements. As in other manifestations of social inequality, this labor is not distributed evenly or randomly across different social categories but is systematically more likely to befall some rather than others (Sekimoto & Brown, 2020). As the costs of this labor are financial, physical, interactional, and psychological, various social categories of citizens have more or fewer resources to perform or avoid it and face differently severe consequences when they do.

Conclusion: somatic labor and critical sensory ethnography

As a concept and a lens, somatic labor will hopefully inspire research topics and methods of critical sensory ethnographic projects. Such endeavors could, for example, establish the historical and macro-social causes of sensory degradation, analyze how various social groups and communities experience it, identify the somatic labor they must perform to manage it, the immediate conditions under which they do so, the costs they incur to do so, and their attempts to resist it. Critical sensory ethnographies could also examine those social movements that have specifically emerged in response to sensory degradation. Those include, for example, movements resisting noise (Montano, 2020; Prochnik, 2011; Smith, 2013; Yeung, 2022), undesirable smells (De vader & Paxson, 2009; Neubert, 2020), compromised taste (Hayes-Conroy & Martin, 2010; Hayes-Conroy & Hayes-Conroy, 2008; Petrini, 2003, 2006); and acceleration (De Graaf, 2003; Heitman et al., 2011; Honoré, 2005; Moira et al., 2017; O'Neill et al., 2014). These ethnographies could also include analyses of the dominant discourses that construct sensory degradation in the mass media and other institutions whose task is to communicate ideologically motivated interpretations.

Intelligent sense-making distinguishes humans from other species. This does not mean that humans are the only species that practices sense-making, but that they have uniquely socialized and reflexive ways of doing so. In addition, and in contrast to other species, humans can purposefully reshape their sensory apparatus and sense-making practices, and collaboratively negotiate their meanings, uses, deployment, inhibitions, etc. As the logic of human evolution assumes the increasing sophistication and harmonious integration of all our senses, sensory degradation constitutes a significant regression in this trajectory, and hence in human creativity and intelligence. By stunting the development of this uniquely human aptitude, sensory degradation dehumanizes those subjected to it. The same obtains for somatic labor. By continuously mobilizing sensory attention for the purposes of self-protection and damage control, threats to sensory integrity thwart the human aspiration to develop, creatively apply, and integrate the senses. By calling attention to the dehumanizing aspects of sensory degradation and somatic labor, this chapter hopefully provides a modest contribution to the larger conversation about the purposes of sensory ethnography in the hypermodern moment. It will hopefully also inspire resistance against these accelerating trends.

Notes

1 The trends I have in mind here include frozen dinners, TV cooking shows, online ordering of food, food delivery from restaurants, diet apps, nutrition plans, etc.
2 "Loss of sense" and "senselessness" are approximate translations of "perte de sens," which, in French, also translates as disorientation, irrationality, pointlessness, and absurdity.
3 Rosa also adds alienation from space and everyday objects.
4 Of course, the haptic, acoustic, sight, vestibular, proprioception, and other senses are stimulated very differently when one plays certain types of video games.
5 For example, Amazon was scandalously granted a "photography against a white background" patent (see Duan, 2014).
6 See also Vannini et al. (2012). For an alternative definition, see Sekimoto and Brown (2020).

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7

SENSORY FUTURES ETHNOGRAPHY

Sensing at the edge of the future

Sarah Pink

Introducing sensory scholarship and engagement *forwards*

What does the future feel like? How can our capacity to sense possible futures be harnessed to create optimistic modes of going forward in the world? How can we imagine, sense and work toward hopeful futures in relation to the inevitable uncertainty of what will happen next?

In this chapter, I outline sensory futures ethnography and argue that it should underpin a new mode of *doing scholarship and engagement forwards*. I call for a new expanded approach to the social sciences, which can effectively engage in and influence the ways futures are conceptualized and worked toward (Pink, 2022a). Ethnography, including modes of innovative, creative, design-focused, and personal narrative-inspired ethnographic practice, I argue, should be at the core of this approach. Attention to sensory modes of being, knowing, and imagining in the present and in possible futures is essential to such a shift in emphasis. New knowledge about how possible futures could feel is essential for renewed or expanded social sciences to genuinely participate, as science, technology, and engineering disciplines seek to shape our futures.

In this chapter, I demonstrate this through the example of air futures, by discussing how air and breathing figure in the sensorial and non-representational ways futures are anticipated, experienced, and hoped for. This chapter is designed to stand alone and can be read independently. However, it also bears relation to my past methodological work, in *Doing Sensory Ethnography* (2015) and *Doing Visual Ethnography* (2021a), and contributes to ideas developed in two recent works: an article, "Sensuous Futures," which proposes sensory ethnography as a mode of generating trusted futures (Pink, 2021b), and my book, *Emerging Technologies/Life at the Edge of the Future* (Pink, 2022a), which draws on ethnographic practice to discuss possible future life. Sensory futures ethnography contributes to most of my projects because it provides an underpinning sensibility to those dimensions of possibility which are not necessarily ever spoken about or visible.

In the following sections, I first explain why sensory futures ethnography is particularly apt for our present circumstances of the so-called crisis. I next define sensory futures ethnography as a practice. I then demonstrate sensory futures ethnography in practice through the

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example of the future of the air we breathe. To sum up, I reiterate the need for a practical, interdisciplinary approach to futures in the social sciences, which goes beyond simply advancing academic disciplines, to work toward hopeful futures.

Reframing the crisis, sensing forward

The purpose of sensory futures ethnography is not simply to study how the future might feel. Rather, understanding and narrating the sensoriality of possible futures complicates and should moderate existing practices of prediction which are dominated by the high-level analyses of professional futurists and the work of business consultancies who tend to depend on surveys and other data to identify trends, model scenarios, and perform forecasting. Societal knowledge about futures is increasingly derived from predictive data analytics, whereby data scientists seek to know what people are likely to do next based on past behavior. These quantified stories about the future are inevitably incomplete, and therefore unreliable. There is also a politics to their dominance, in a context where anthropologist Tim Ingold calls for us to rethink questions beyond the "predictive horizons" of what he sees as "the relentless expansion of big science, aided and abetted by state actors and multinational corporations," to propose a new starting point in asking "how ought we to live?" (Ingold, 2021, p. 336). Turning attention to how futures are felt, sensed, and imagined beyond predictive quantification enables social scientists to foreground more realistic, fine-grained, and plausible futures. Such new accounts of futures will complicate those of the quantifying sciences by surfacing how the inevitable contingency and improvisation of human everyday life might shape possible futures. However, sensory futures knowledge can also be mobilized toward planning for more plausible and hopeful futures, taking us beyond crisis and carving a new role for the social sciences.

A world in crisis

Decisive statements about the urgent challenges of living in a world in crisis are increasingly visible in the work of influential anthropologists across the world (Pink, 2022a, p. 43). Examples include the conviction that we are in what anthropologist Ghassan Hage calls an "ecological crisis," where hope has been constructed through a vision for the future which depends on "continually extracting from nature" (2016, p. 467). In this situation, anthropologists have expressed the need for new modes of hope, which shift attention away from hoping for a technological or other solution or end point, toward instead a focus on hoping collaboratively or collectively on the ground (discussed in Pink, 2022a). In brief, for instance, for Hage, this means politics of "[c]o-hoping with the other" (rather than at the expense of others) whereby the other might be another human or another species (Hage, 2016, p. 467) and for Ingold hope lies in a commitment to learning from others, "as a form of commitment, of being and letting be, and to find the ontological an ethical force of this commitment as a foundation for hope" (2021, p. 78). This anthropological focus on hope is perhaps not surprising: anthropologists themselves have noted how in moments of economic or political uncertainty and crisis, hope frequently becomes foregrounded (Bryant & Knight, 2019; Cook, 2018; Kleist & Jansen, 2016); and Hirokazu Miyazaki (2004) has proposed "hope as method," whereby hope becomes part of relations of "commonality and difference across academic and nonacademic forms of knowledge" (Miyazaki, 2006, p. 149).

Such modes of hope radically shift dominant narratives about futures, constituted through visions of end points or modeled scenarios. They instead invite us to consider hope as shared, as experiential, and as constituted in relation to other people, other species, and our environments. Thus, hope incomes about and is experienced, in my interpretation, through our sensory, embodied ways of being in and knowing with the world. Hope in this iteration is not pinned on a decisive or predicted moment or point in the future, but rather it is incremental, lived, situated, and *sensorial* as much as it is cognitive. Hope is embedded in the ways we live, in everyday routines, in the mundane artifacts, actions, emotions, and sensations that infrastructure the ways in which we move forward in life. For example, it is inseparable from how people heat and cool their homes, it is implicated in how people keep their families and loved ones safe from airborne viruses and allergens, and it is part of the choices people make regarding the energy they use to power everyday technologies and where they source it. All, of course, within the diversity and limits of the choices any person in any given situation might have. As I explain ethnographically below, these modes of hope are played out in the everyday, in ways that are felt, sensed, and not necessarily always articulated in words. Sensory ethnography practice is, among other things, a way in which to make them visible, accessible to scholars, acknowledged and to drive impact outside academia, and thus constitute new modes of hope.

However, my approach to hope differs from the above invocation of hope as a response to crisis. The modes of co- and collective hope that Miyazaki, Ingold, and Hage have proposed are incisive in their rebuttal of the destructive and extractivist visions of corporate capitalism which have so long controlled and abused the world's resources. However, rather than serving as an antidote to a crisis, I propose that sensory modes of hope are better framed through a narrative of what anthropologist Janet Roitman calls "anti-crisis" (2013). Roitman's intervention is significant because she demonstrates that thinking history (and, I emphasize, futures) through a narrative of crisis and its resolution is simply an after-the-event, or retrospective, mode of understanding how things actually proceed. Instead, I propose social scientists should start *thinking forward*. This also involves *sensing forward*, since if we are to move forward in hope, we must think about what hope will feel like, both at the edge of the future as we go along in life and also in possible futures beyond what we know now. Ethnographically, as I explain later, this means feeling futures on our feet when we are in the creative spaces of ethnographic encounters. Practically, this involves asking how we might find ourselves in futures that feel right and are lived in hope, and what kinds of steps forward are needed.

Bold statements about the need to divert an increasingly urgent crisis—where runaway capitalism, climate change, and technological automation have created a severe problem which requires a solution—are powerful calls for action. Something, of course, does need to be done, given that we find ourselves in a situation of increasingly evident climatic destruction and often articulated dread. However, given that there is plenty of evidence that solutions constructed from above don't usually work (Morozov, 2013), my training in anthropology directs me to look to the everyday, and to ask how life actually proceeds into futures, what people really hope for, and how understanding this can support practical and experiential ways of collective and active hope toward environmentally sustainable, caring, and ethical futures. This is not a solution, rather it is a call to refocus.

Social sciences in crisis

I end my book *Emerging Technologies/Life at the Edge of the Future* by envisioning a commencement rather than a solution, and making a call to "do scholarship differently and do

it in a new temporality and on a greater scale" (2022a, p. 141). In this chapter, I take this point up, to suggest how sensory futures ethnography offers an opportunity to engage with the practice of *doing social science forward*, the development of which I believe is a priority. As women anthropologists have recently emphasized the discipline "risks becoming an anachronism" (Knox, 2021, p. 124) and "needs rewriting" (Mahmud, 2021, p. 354). The 2022 #thatarticle retraction of an ethically inappropriate article in the journal *Qualitative Research*, edited by British sociologists, likewise raises the question of *what sensory ethnography is for*. My argument is that sensory ethnography must be harnessed to support work toward ethical, inclusive, safe, trusted, and hopeful futures, and this involves revising what academia can be and how it can be active in the world.

What is sensory futures ethnography

Future has recently become a focus for social scientists, as anthropologists and sociologists seek to understand various facets of how we might encounter the as yet unknown. Most recently, the work of Amanda Bryant and Daniel Knight has called for an anthropology *of* the future (2019) in order to study the anticipatory modes of the present. The futures anthropology movement which I participate in (Lanzeni et al., 2022; Pink & Salazar, 2017; Salazar et al., 2017) is however centered not simply on the study *of* the future, but studies *in* and *with* futures, as well as methodologies for investigating futures (Pink, 2021a, 2021b, 2022b; Pink et al., 2022). It is also an interdisciplinary practice in which I have collaborated with designers, for whom futures are inevitable to their practice (Akama et al., 2018). This includes turning away from critiques of the dystopian possibilities of capitalism toward what I call doing *anthropology forward* through innovative ethnographic practice and future-focused theory and concepts (Pink, 2022a, 2023), and by implication *doing social sciences forward*.

Sensory futures ethnography has a different agenda to existing anthropologies of futures, and to avoid confusion, my approach differs from Bryant and Knight's (2019) "The anthropology of the future" which understands the present as coming about in relation to our orientation to the future, and analyzes everyday mundane life as a place of anticipation constituted by human actions (Bryant & Knight, 2019, p. 18). In contrast, sensory futures ethnography leads with anticipatory concepts like hope, trust, and anxiety (explored in Pink, 2021b), in order to investigate experiences—or sensory and affective feelings—of the indeterminacy of the present and the future. Anticipatory concepts are therefore engaged to invoke the sensoriality and affect of possible futures, rather than to describe or represent them. Human geographers have fiercely critiqued practices of mapping space (Massey, 1995) and we should be equally cautious about mapping futures, instead we must gain an understanding of what possible future sites could *feel* like, and how people would like to *feel* in these possible futures. This, I propose, offers a route toward comprehending how to orient our hopes and modes of going forward into futures. Thus, sensory futures ethnography, like futures anthropology, is not concerned with the anthropological or sociological study *of* the senses or of the future, but involves moving forward through experiential worlds, right up to the *edge of the future* and asking what it would feel like experience the as yet unknown to follow (Pink, 2021b, 2022a).

In the remainder of this section, I outline two facets of this shift, selected because they lie at the core of how ethnographic practice has been shaped over the last 50 years: *reflexivity forward* and *collaboration forward*.

Sensory reflexivity forward

Sensory ethnography (Pink, 2015) is reflexive in the anthropological sense that it obliges us to situate ourselves as researchers in the complex spatial, social, and temporal circumstances of our practice. However, "earlier urges toward reflexivity have focused on the past" and thus, "applying the same reflexive gaze to our imagined and sensed futures is a methodological step toward connecting to other people's ways of sensing what might happen next" (Pink, 2021b, p. 200). This is not just a methodological point that helps ethnographers to produce "better" research, but is also a mode of engaged research since: "to intervene in the world, in collaboration with others, we need to attend to what these interventions might feel like and to the ways that the circumstances that might emerge from them will feel" (Pink, 2021b, p. 200).

This leap to future-focused reflexivity challenges some of the basic principles of ethnographic practice which, conventionally, are ethically and theoretically focused on the present as it slips over into the past. Such a reliance on the past tense for the ethical validation of ethnographic practice emerged, or became mainstreamed in academia in the 1980–1990s. The reflexive commitments of ethical research conduct thus situated researchers and participants in research in the past, seeking to remain loyal to something that has happened and to how people were placed in those circumstances. As a response to the 1980s critique of anthropology as an objectifying practice, this approach evaded the problematic crystallization of people who were at the time called ethnographic "informants" into a continuous present (see Pink, 2021a for a discussion). However, it simultaneously set ethnographic practice in a past-oriented mode, which has wholescale impeded ethnographic scholars across the social science disciplines from participating in the futures spaces that currently dominate the narratives of industry and government, and are now influenced by professional futurists, the consultants and engineers. To be able to participate in this space, I propose a new future-focused and reflexive sensory ethnographic practice.

Sensory collaboration forward

Reflexive ethnographic practice often places an emphasis on collaboration, whereby ways of knowing created through research relationships are respected as just that, rather than the objective knowledge of the ethnographer. It is, therefore, surprising that social scientists still frequently present their work as the *anthropology of* or *sociology of* some or other theme, rather than *anthropology with* or *sociology with.* This is, of course, a tricky situation for social scientists however collaborative they are in their fieldwork practices, since the dominant mode of participation in or contribution to the evolution of an academic discipline is to have proclaimed that one has undertaken, or even has established, for instance, *The Anthropology of the Future*, or *The Anthropology of the Senses.*

But these titles are too determinate for sensory futures ethnography. *The Future* or *The Senses* do not actually exist externally to the living world or emanate from it in such a way that they leave it. The former is contingent on human imaginaries and multispecies unconscious modes of preparation for what might be next. The latter depends on sensory perception and knowing. Sensory futures ethnography directly challenges this stance, in that it treats future and senses as emergent from and part of the ongoing process of life, rather than as objective categories that ethnographic practice can provide an empirical or evidential basis for. The anthropology or sociology of the future or of the senses undertakes the study *of* societal and

social phenomena. By this I mean that ethnographic practice that is focused on discovering the actions, experiences, and relations of people, things and processes, and in describing them is performing a study *of* them. Some such studies are collaborative, or seek to perform ethnography "with" rather than simply an ethnographic study of people, but in such cases ethnography "with" still often leads to the disciplinary study or discovery *of*. I next consider sensory futures ethnography in practice through the example of air futures.

The future of air is tense

Air is a visceral, encompassing, and inevitable element of everyday experience and knowing. It is a materiality that we know *about* and know *in* and an inescapable element of how we experience past, future, and present. There is an excellent existing body of anthropological research concerned with air, reviewed elsewhere (Pink, 2022a), but while respectfully acknowledging its contribution, here my concern is different: to demonstrate sensory ethnography through the example of what air futures could feel like.

Air has emerged at the center of my research agenda precisely because it has become increasingly visible in contemporary future imaginaries (see Pink, 2022a). At the risk of oversimplifying, the airborne virus of a global pandemic, the smoke of increasingly wildfires across the globe, asthma thunderstorms, frequent extreme temperatures, and the enduring presence of asbestos fibers in buildings are becoming part of everyday life, making air a concern from two perspectives. Governments, organizations, and people are seeking and establishing new ways to protect themselves, their families, employees, and citizens from the air that carries these threats. There is a growth in the market for domestic air purification and filtration systems, schools and organizations are installing new air filtration and circulation systems. But while such technologies might keep people safe from the air, the resource extraction and energy costs implied in their production and transportation, the energy demand they create, the data storage and processing they require, and their possible future as e-waste have the potential to damage the air further. Thus, creating the conundrum of how we might *go forward* in such a way that we can protect both our future selves and our future air, rather than proceeding in such a way that our very urge to protect ourselves from the air could damage it still further. The future of air is tense, because it is characterized by this tension: between planetary, societal, and individual care.

I next develop an example from the process of the making of the documentary film *Future Air*. *Future Air* is developed within the Digital Energy Futures project, and draws on a review of 64 reports (Dahlgren et al., 2020), 72 online ethnographic encounters with participants in their homes (Strengers et al., 2021), the experience of making the *Digital Energy Futures* documentary (Pink, 2022), 10 Design Ethnography workshops with 42 householders, and a design ethnographic foresighting analysis (Pink et al., 2022).

Air futures at home

In Australia (and other sites in the world), everyday life in the home is experienced in circumstances of increasingly extreme weather, accompanied by visceral, sensory, and affective manifestations of climate change. These include climate and weather events that impact the air we breathe, in the form of deathly asthma thunderstorms, bushfires whose smoke spreads and travels great distances to fill even the cities that seem safe from the fires themselves, indoor allergens, dust, and mold, and airborne viruses such as COVID-19. These threats to

our air become (unevenly and inequitably distributed) experiential realities, invoking new materialities, technologies, and systems. As experiential realities, they are represented in the visceral and affective sensing of pollution, heavy air, thick or smoky air, the feeling of fabrics across one's face and the anxieties around invisible and unfelt airborne viruses. Materially and technologically, they include mask wearing and the introduction of air filtration and purification or insulation technologies and systems. These sensory, material, and technological realities also become what I call anticipatory infrastructures (Pink et al., 2023); that is, they inform knowledge ideas or concepts upon the basis of which possible futures might be imagined. They enable us to imagine future experiences, technologies, and materialities. They are part of how we generate both representational descriptions and sensory modes of knowing how we would want futures to be composed and *how we would like to feel in the future*—and of course also the converse and more dystopian visions of futures where the way we feel is shaped by relations of power, climates, and materialities that have uncomfortable sensorial and effective consequences.

Fred's air story

Yolande Strengers and I visited Fred and his family in their home on a rainy spring day in 2022. Yolande had met Fred in our online ethnography during the pandemic and we invited him to participate in the film due to his interest in technology and energy and environmental awareness. Fred told us he had started to become conscious of air quality when he first sensed the change in the air as he rode his motorbike into the city. This experience led him to

Figure 7.1 Yolande Strengers and I visited Fred at home to film for the Air Futures documentary in the southern hemisphere spring in 2022. Image by Sarah Pink, ©Digital Energy Futures 2022.

Figure 7.2 Fred is committed to electric vehicles, plans to convert an existing car to electric, and keeps his motorbike and skateboard in his garage. Image by Sarah Pink, ©Digital Energy Futures 2022.

increasingly reflect on the quality of the air at home, and hence air purification and filtration technologies increasingly became part of his family's life.

Fred's story of moving toward air technologies was filled with description of how his sensory experiences had shaped the decisions he made. Please read his words and imagine how his sensory and affective experiences were interwoven with actions, materialities, and shifts toward air technologies. He told us:

> I was not concerned about air quality, I didn't have hay fever, like my wife doesn't get it, and it just wasn't something that was on the top of our mind being so far out from the city. . . . [W]hen I was going for a walk, with the dog, or just cycling around, I just felt it was easy to breathe. But whenever I rode my motorbike to the city, it was like, *I could feel it*, as soon as I entered closer to the city, my breathing would be a little bit more, um, not like difficult, but you feel that you're getting less oxygen for some reason, by breathing the same rate, and you just weren't as relaxed. Um, so when I started going to the city and coming back, I thought that that might be one of the reasons to start getting air purification at home, and then Covid hit as well two years ago, and we started, not hoarding but getting whatever we thought was right for the house . . . for air quality.

"Breathing easy and feeling better" was at the center of Fred's story. Air is our life source, the experience of breathing is central to feelings of comfort and safety, in the present and as people plan for their futures. However, as noted earlier, the objectives of sensory ethnography go further, to investigate what possible futures may feel like, beyond simply understanding how people anticipate their futures and the anticipatory actions they take.

Figure 7.3 Fred and his dog Taco showed us the air purifier in his study. Image by Sarah Pink, ©Digital Energy Futures 2022.

After talking through his air technology story, we asked Fred to show us how air technologies had become part of the materiality of the home he shared with his wife, young daughter, and dog.

Fred showed us their smart air purifier in the bedroom and a large air purifier in their shared study, telling us he "loved" what he could learn from them, for example, in the bedroom

> [I]t will give me an alert if the air quality is poor, and I didn't believe in any of this until, like we'll be cooking and then my wife will turn the fan on for the central and it will pump air from it into all of the rooms, just to get rid of the it from the kitchen and I'll get an alert that the bedroom's got a low air quality, and I'm like, that must know, like it must actually sense the air quality from the cooking . . . through the house. And the fact that it can travel so far, and still be poor air quality and still be measured, and still tell me. I thought "wow, this is actually like a great indication of actual air quality."

While filming with Fred, we learned about how he experienced air outdoors and in his home, how he traveled, changing from his electric motorbike to his car due to the pollution he sensed. We also learned how he had increasingly started using air technologies at home, and how this intersected with his values, and his commitment to protect the environment as well as to care for his family. For Fred, there was a tension between the question of protecting his home environment and damaging the environment and he actively sought to use his home air technologies in ways that were environmentally sustainable.

As an ethnographer working on the ground, I started to form hunches, based on what Fred described and what he had shown us. Sensory ethnography is not simply a matter of

Figure 7.4 The bedroom air purifier, set by the bed alongside electric device charging technologies. Image by Sarah Pink, ©Digital Energy Futures 2022.

doing the fieldwork first and the analysis later, and the sensory futures ethnographer needs to think on her feet, to bring on-the-spot analysis into the ethnographic encounter. Everything I was learning with Fred enabled me to start to create ideas for speculative discussions about his future and to further explore the tension between protecting his family and protecting the environment.

First, however, we wanted to understand what Fred's ideal future air technology would be. What would he imagine for the future on the basis of the possibilities that he had experienced? Fred envisaged new technologies which would access predictive weather and temperature data and make decisions that would keep his home at the right temperature, without him even having to think about it. As regards air quality, he wished this system "would just always keep it right but notify you when the outside air quality's low."

Thinking back to my research into air filtration and purification technology, I remembered the automated electronic face masks which had emerged on the market; for instance, one prototype mask uses sensors to detect harmful air particles and activate the device's pump (Coxworth, 2021). But I realized that to introduce this as a probe through which to speculate further, I needed to first understand how Fred felt about masks, sensorially and emotionally. Fred said that during the pandemic, he "was comfortable wearing a mask." He felt that it would benefit others if he wore a mask, since he said "if I got covid I'd spread it less" and he also "felt safer if everyone was wearing one." He saw the "downside was the less healthy aspect of breathing your own air again."

I suggested the idea of an automated face mask to him, which would filter and purify the air when needed, and reflecting on the technology, he said, "that's so cool but so . . . I can't imagine how that could ever be fashionable." So I then returned to the beginning of our conversation where he had told us that he had first engaged with air quality technology when

riding his electric motorbike into the city. I asked him what he thought about the possibility of a motorbike helmet with a filtration system in it:

> That's a great idea, I've never thought about that to be honest, being prompted with that now, that would be awesome because I would choose motorcycling, . . . any day. The only that stops me going to the city with it is essentially that, feeling that you're not getting the right air quality, so if there was a helmet that could like, filter out all the, that, even if it's not cost effective, I would pay for that, take my money, like that's amazing if that's an option.

Imagining a future electric motorbike helmet tech helped Fred to resolve the tension that informs the film, and which he raised himself: he would be able to care for the environment, and enjoy traveling by riding his electric motorbike (rather than by driving a fossil fuel powered car), and care for himself by wearing a helmet with its own air filtration and purification system, meaning he could breathe air that felt clean while riding. While this future imaginary does not solve the conundrum of saving the environment versus saving oneself, it is exemplary because it shows how the sensory knowing and experience that informed the very decisions that Fred initially made to invest in new air technologies also participated in the way his future sensory imaginary was constituted. The example is didactic in that it directs us to ask ourselves, and participants in our research to what the future could feel like, and how certain sensorial and affective states—that state of "feeling right"—might be constituted through particular future trajectories.

How can sensory futures ethnography constitute hopeful futures?

This chapter develops one sensory ethnographic example in depth in order to foreground how sensory futures ethnographic knowing emerges and enables researchers to collaboratively know possible futures with participants. It is designed to foreground how everyday life values become invested in possible future scenarios—rather than to predict futures. Its significance lies in its ability to show us how people's future priorities, values, and practices come about and how they can shape everyday life in the future. Therefore, we would not predict that in the future Fred and others who share his values will all ride to work on electric motorbikes wearing electric air filtering and purifying helmets. However, if our wider group of participants coincided with Fred in their future visions, then we may argue that everyday futures will be shaped by a desire to balance the relationship between protecting oneself and family and protecting the environment. From this, we might then consider how this balance may tip in relation to the contingent circumstances of everyday life as it emerges in possible futures. As such, sensory futures ethnography engages with the possible future sites where everyday hope—for example, hope for a safe air future for one's family, and hope that we can protect our air—might be lived out. Fred's example shows how a speculative approach to sensory future ethnography can invoke imaginaries where hope can be sensed.

However, there is another dimension to the role of sensory anthropologists in creating hopeful futures. In the current process of climate change, it is urgent that we not only hope that people, large-scale, will act to reduce carbon emissions in their present and future everyday lives. Rather, anthropologists might actively work toward this possibility in tandem with shifts in policy and new interdisciplinary science where the social sciences are as important as the STEM sciences. As we move toward and into these futures, there is no time for

the defense of traditional past-oriented anthropology and no place for theoretical jousting. Instead, it is the moment for a practical theory of sensory futures, one which allows us to use theoretical "what ifs" ethically and expediently, in ways that support us moving forward adeptly into uncertainty. Such an approach must be respectful of the historicity of people, environment, planet, and ideas, but departs from the historical traditions of academia.

Sensory futures ethnography makes a contribution to advancing academic disciplines in new directions, away from the sustained focus on the past. It opens new theoretical and methodological questions, and the opportunity to generate new ways of knowing. But it is not simply an academic endeavor. Sensory futures ethnography opens up an alternative route to exploring possible futures, and importantly it enables us to *research forward* with hope. It invites us to consider the question of what possible futures might *feel like*, and on that basis to connect hopes for planetary, societal, and individual futures. In my own practice, sensory futures ethnography is part of a wider move to a more engaged, interventional contemporary mode of addressing futures in scholarship and practice. This, I argue, is required precisely because of the dominance of and dependency in government and industry on predictive data analytics, professional futurists, and consultancies to advise on what the future will hold. Social scientists should be bold in the ways we reframe dominant visions of the future. We need to generate new methods of research and powerful modes of engagement, since (particularly in the future technology field) we need to speak in an arena where the loud voices of engineers and consultancy companies have conventionally held the stage.

I advocate for an approach that reserves no privileges for academic elites and disciplinary traditions, which is rooted in integrity, has an ethical commitment to futures, and that treats scholarship and engagement as part of the same practice. Like Futures Anthropology as expressed in the manifesto of the Futures Anthropology Network (FAN) of the European Association of Social Anthropologists (in Salazar et al., 2017), sensory futures ethnographers should get their hands dirty and take risks. Sensory futures anthropology doesn't stop at critique but gets in there to collaborate and seek to bring about change, sometimes in places where many anthropologists would never go.

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PART 2

The practice of sensory ethnography

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8

AWARENESS, FOCUS, AND NUANCE

Reflexivity and reflective embodiment in sensory ethnography

John Hockey and Jacquelyn Allen-Collinson

Reflexivity and the reflexive process are vital aspects of ethnographic research (Bieler et al., 2021; Buscatto, 2016), including sensory ethnographic studies (Hockey, 2021; McNarry et al., 2019; Sparkes, 2017), and autoethnographic research (Allen-Collinson, 2013). In this chapter, we examine the complexities of sensory reflexivity as it was practiced by us in two auto/ethnographic projects. The first involved John's extended participant observation with an operational unit of UK British infantry. The second constituted a collaborative autoethnography on distance running, injury, and rehabilitation, and involved both of us (for extended details of the fieldwork, see Allen-Collinson & Hockey, 2020; Hockey, 2016). While neither project was initially conceptualized as being a sensory auto/ethnography specifically, given the salience of the body and corporeal processes in both, the sensory dimensions emerged very strongly. We begin the discussion with a consideration of reflexivity itself.

Reflexivity in sensory ethnography

Reflexivity can be defined as the recognition that the researcher herself/himself cannot be detached from the research setting, or entirely independent of the research process, but rather is fundamentally part of these, influencing and being influenced by the setting and its social actors. This perspective challenges naive, positivist ideas that research can somehow provide a neutral or distanced perspective (McNarry et al., 2019). As academics and researchers, we are socialized into sociocultural (and gendered, classed, aged, and so on) ways of thinking and of being, and, consequently, we subscribe to norms and values as a result of such socialization. Decisions about the research projects we wish to undertake (at least those where we have choice) are shaped by our socialization and biographical experiences, as are our paradigmatic stance, methodology, and research approach, and choice of theoretical and/or conceptual framework. Engagement with reflexivity means we need to be aware of our positionality regarding the above factors.

Furthermore, our ideas, assumptions, and presuppositions, meanings, and interpretations are always inevitably with us, including in our observations, sensations, and experiences of the (auto)ethnographic field, so that these can never be totally "neutral" or value-free.

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Indeed, the very language in which we record these observations and sensations, and any subsequent "write-up" documentation, such as articles and reports, is replete with our values and biography (as also of course is any "scientific" laboratory report). Hence, we agree with Atkinson (2022, p. 146) that

> reflexivity (in that sense of proactively reactive research) and reflective practice imply one another. A recognition that we constitute our phenomena through our methodological interactions with the social and material world enjoins critical reflection on what we are doing and how we are doing it.

Being reflexive means therefore that we need to make best efforts to "stand back" and maintain a critical perspective and analytic distance on our own situatedness in the research. We seek to be critically aware and reflexive, as far as possible, about our social positioning and our impact upon the ethnographic field under investigation. Via a process of "bracketing," we can be self-critical toward our assumptions and preconceptions, which we can seek to identify, address, and challenge (Allen-Collinson, 2011).

In sensory ethnography, as Pink (2009) notes, from the late 1980s onward, reflexive accounts of the roles played by the senses in anthropological fieldwork began to emerge, along with an increasing academic interest in embodiment generally. This "reflexive turn" was also a response to debates about the limitations of an ethnographic writing culture that Howes (1991) described as being "verbocentric" and limited, as it failed to account for the senses. From this time on, it was acknowledged that there was a need for reflexive engagements with how ethnographic knowledge is produced, and a recognition of the importance of the body in human experience and also in academic practice (Pink, 2009). The practice of sensory ethnography is thus dependent upon a particular kind of researcher *awareness*, which has a number of levels. First, there is the general level of being cognizant that sensory activity is fundamental to making social interaction possible. Second, there is an alertness to particular contextual features that impact upon sensory practices as they occur. Third, there is a focused vigilance upon the latter practices themselves in a detailed recording of them, what they accomplish, and what they mean for participants.

This kind of researcher awareness is precisely what we seek to portray analytically below, drawing on the two separate projects introduced earlier. To contextualize these projects, and as part of our engagement with reflexivity, we first explain the predisposing features that propelled us to engage with these research studies. Then, we portray *how* we actually engaged with reflexivity in both projects, drawing on grounded examples emanating from our data. The examples are portrayed under the following themes: relearning sensory embodiment, danger and awareness, alertness and difference, and encountering the sensory new.

Motives and meaning

What induces ethnographers to delve into particular social worlds using participant observation, which is arguably the most intensive and all-encompassing of qualitative methods, is always a complex "vocabulary of motives" (Mills, 1940). The ethnography of the British infantry (Hockey, 1986) completed by John, was propelled by two emotionally charged motives. First, completing the study was seen as the end of a ten-year journey to "get educated," which started with John obtaining his first formal school qualification at the age of 25. Second, the topic constituted an examination of his pre-university life when he had

soldiered for a decade as an Army Corporal. The key aim for John was to understand (with the aid of sociological tools) that decade, which at the time of the fieldwork was perceived as "wasted" (Hockey, 1996). The motives then were personal and powerful, and the ethnographic process was conceptualized extremely positively as the means to achieve both objectives.

The distance running project held a similar personal and emotional intensity (Allen-Collinson & Hockey, 2020). Although non-elite, performance athletes, we were highly committed, "serious" distance runners (Allen-Collinson & Hockey, 2007), and training partners who had, immediately prior to the research, incurred long-term knee injuries in the same week of winter training in an English rural town. Subsequently, we endured almost two years of long, painful, and slow struggle, to recover, rehabilitate, and begin to run again. During that time, there was much emotional turmoil, self-questioning, and repeated frustration over our individual and collective lack of progress. The autoethnographic research on that injury-to-recovery process was propelled, soon after suffering the injuries, by the motive of engaging in something positive and productive; securing some sociological, analytic purchase would, we both felt, help us cope with such a negative collective experience.

These highly positive motives for both projects created an intensity of purpose, which fostered an *alertness* to, and subsequently a detailed recording of, the complexities of the social processes at hand; passion then propelled our analytic processes. Thus, there was both a solo (in John's infantry research) and then later a collective (in our running research) determination to "miss nothing" during fieldwork and data collection. This in turn meant paying attention to small things and the contexts in which they happened. Such concern with this level of analysis of the mundane was also influenced by our sociological backgrounds, our interest in micro-sociological theoretical frameworks and processes, and our individual and collective interest in ethnomethodology (EM) with its focus on the mundane processes of *how* things get done via sequences of commonplace action. These processes Garfinkel (1967, p. 32) has termed "artful practices," the most basic and arguably fundamental of which are found at the sensory level. It is these processes we aimed to identify and explore in detail. Moreover, by the time the running project commenced, John had published a general paper on the problems of researching familiar settings. So, while there was an academic resource (EM) influencing our focus on analyzing at the sensory level, there was also another resource (Hockey, 1993) which alerted us to the problems of engaging with normally taken-for-granted phenomena. This is not to say that either venture was conceived as EM from inception; indeed, both were initially framed as essentially symbolic interactionist in character.

The military project was viewed as a Chicago School style ethnography, and the running project's initial focus was at the level of challenges to our running identity and our engagement in "identity work" (Allen-Collinson & Hockey, 2007). During the data collection phases, we had little familiarity at the time with the conceptual resources offered by the anthropology of the senses/sensory anthropology (Howes, 2019), or phenomenology. Rather, our primary concern was to collect data on mundane, habitual practices, or what Moran (2007, p. 3) has termed the "infra-ordinary," as "that part of our lives that is so routine as to become almost invisible, like infrared light." It was only years later that our awareness of sensory anthropology and then social or cultural phenomenology developed. As Rosaldo (1993) has observed, interpretations are inevitably provisional and made by researchers who are located in certain contexts, who possess certain kinds of knowledge but not others. Simply put, at the time of commencing the above projects, we were intent on collecting data on highly embodied processes, and these data inevitably embraced the sensory domain, and indeed were strongly

sensorily shaped, and fundamental to the practices of two *sensory communities* (Vannini et al., 2012) with which we were involved.

Embodied habits and everyday routines

As Edensor (2001, p. 61) notes:

> The everyday can partly be captured by unreflexive habits, inscribed on the body, a normative unquestioned way of being in the world. . . . These shared habits strengthen affective and cognitive links, constitute a habitus of acquired skills which minimize unnecessary reflection every time a decision is required.

These habits are in effect *practices* that are linked together into daily routines and "coordinated with other activities and organised in a particular serial order" (O'Dell, 2009, p. 85). For their effective completion, both competitive sport and military activities demand huge amounts of training, comprised of routines that are repeated endlessly, day after day, month after month, and so on. In the case of distance running, such routines enhance competitive performance, and in the case of infantry, they are designed to increase operational effectiveness when confronting the "enemy." These habitual routines in both cases embed fundamental sensory perceptions at the somatic level of sociocultural members' being. In their own particular ways, they become mundane and taken for granted, and therefore difficult to grasp analytically, particularly for those "insider-members" who have been heavily socialized into them and have practiced them for prolonged periods of time (as in our own case).

Physicality and enforced sensory awareness

Along with the resources of symbolic interactionism and EM in our collective biographies, there was also a fortuitous coincidence that both the research projects had deeply corporeal, even visceral, elements. Distance running is immensely physically demanding and corporeally grounded. Thus, training twice a day, seven days a week, to enhance performance is a pattern found in our athletic biographies. The physical practices, and also at times the resulting injuries from those practices, had for years sensitized us to the nuances of somatic sensory patterns and enhanced our understandings of those patterns. For example, the nature of the pain originating from an injured Achilles' tendon was "known" and recognized and could be distinguished from pain originating from a damaged peroneal tendon (these tendons are found close to each other). We also learned over time and with experience which of the two is more difficult to deal with and keep on running (the former!).

As insiders to the distance-running culture, our members' knowledge and ways of knowing were present, and drawn on routinely and in many cases tacitly. A key challenge therefore was how to uncover and reveal this knowledge, systematically and in detail, to our researcher selves. The serious knee injuries *forced* us both to stop running. After several attempts to engage in reduced training, together with much frustration and anxiety, we were obliged to admit to ourselves and to each other that we had to stop running (a dire, last-resort decision); the injuries were not responding to all our best efforts to treat them. There was subsequently an initial and very poignant awareness of what we were missing; a core element of "us," individually and jointly, was disrupted, if not abrupted. This initial shock was followed by repeated attempts, over a prolonged period, to rehabilitate, recover, and run again. In

that time span, replete with emotional and corporeal oscillations, effectively we had to relearn how to run, requiring much thought and also the detailed observation of each other's running performance, along with highly developed "somatic empathy" (Allen-Collinson et al., 2016) and intercorporeal attunement. For us, empathy in general involves seeking temporarily to enter into another's lifeworld; it connotes the ability to *feel* with, rather than *about* a person, and to be sensitive toward their reality. The concept of "somatic empathy" highlights the importance of corporeality in empathy, seeking to imagine another's somatic or bodily experience. So, in the running project, we recorded in detail a gamut of sensory perceptions and experiences, raising to conscious awareness many of our previously taken-for-granted running practices, including regarding empathizing with our co-runner.

In the British Army project, nearly eight years after leaving the Army, John returned to undertake participant observation with the military, living mainly 24/7 with infantry troops for three months of intensive and intense fieldwork. During his time in civilian life post-Army, while he remained physically fit, John had not experienced the complete physical assault on the body wrought by routine infantry practices. This shock is immensely sensory, regarding what is felt and habitually enacted, and usually with very little sleep or recovery time. The impact upon John—both corporeal and cognitive—was considerable, with the resulting frequent question-to-self: "Shit, did I actually used to do this?!" There was a forced attention to the sensory domain, which could not be ignored, and thus an alertness to the need to record in detail sensory experience. In both research projects, their fundamentally physical nature, which generated myriad instances of "intense embodiment" (Allen-Collinson & Owton, 2015), compelled our focused attention, thus aiding analytic reflexivity.

Having set the scene and the wider context, we now portray the key themes that structure our examples of reflexivity in action: relearning sensory embodiment, danger and awareness, alertness and difference, and encountering the sensory new. Within these themes, the sensory activities of hearing, moving, touching, seeing, and smelling are featured.

Relearning sensory embodiment

A key means by which reflexivity and heightened awareness came into play was when our everyday ways of being and mundane practices were thrown into stark relief, raising to conscious level what had previously been taken-for-granted. The ability to run was one such practice, which emerged clearly during our running research. For both of us, being able to run had largely been taken-for-granted once we had achieved the necessary levels of fitness. In Jacquelyn's case, this had required a long period of "training" her asthmatic lungs, to be able to dispense with her asthma medication and inhalers, other than in specific situations (e.g., when running in polluted air). Even in these circumstances, our ability to and ways of knowing *how* to run were rarely problematic; it was more a question of knowing we were *able* to run, but temporarily prevented from doing so, for instance, when contending with an acute injury. The extended injury period, however, generated a very different challenge to our running body-selves: experientially, it felt as though we had "forgotten" *how* to run. A familiar, taken-for-granted activity had, over weeks and then months of enforced injury time, become unfamiliar to our body-minds, and the relative ease of running had become "dys-ease" as our bodies—and lower limbs in particular—became objects of intentionality in a state of bodily "dys-appearance" (Leder, 1990). As we gradually attempted to return to running, initially just for very short distances, our reflexivity was increased by having to engage in the active, somatic (re)learning of how to run:

> We have started to run, which, whilst anxiety-provoking is also energising because we are on the way back. Initially tried some tiny 10-metre trots with rests in between, but to our consternation are like babies! Like drunks we stagger all over the place. No coordination, legs out of kilter with arms, unused to the effort so breathing is ragged, legs do not seem to fit with the torso, and head feels wobbly and heavy. Even these baby trots tire us, compounding the problem. So much for our veteran runner status, this is a reality-shock because we now truly know we are absolute beginners once again.

The mind–body shock raised to conscious level an activity that previously had, for the most part, been prereflective. Knowing "how to" run was contingent, we found. We subsequently came to the realization that our running-bodies were indeed projects to be "worked at and accomplished" (Shilling, 2003, pp. 4–5), but never achieved once and for all. Shilling (2016) also identifies the need for research addressing the cognitive, corporeal, and cultural nexus, where thought and reflexivity need to be considered in conjunction with the corporeal.

Analogously, relearning occurred for John when engaging with infantry practices. The following field note derives from a period of training in Alberta during a hot summer in which repeated marches of 20 miles and over were completed on undulating sandy trails. This is what infantry call a TAB (tactical advance to battle), carrying the standard operational load of an 80 lb (36 kg+) Bergen (rucksack), plus a weapon:

> Bergens get pulled on for another TAB, uuuuuuhhhhh, breath exhaled as load hits the body, spine feeling driven down to earth, feel vertebrae CLUNK! Our faces all screwed up tight, eyes clenched closed initially as the load bites, my mind shouts no!—not more today. Move: yesterday's blisters say "good morning!," who's put a lighted match to shoulders?? (shift load find a better position—there is none), toes, heels (blood in boots not a myth), hips (ammunition pouches) rub rub rub. Bite bite lips it helps. . . . Neck muscles grabbed by a monster who is twisting them tighter, tighter. Biceps and forearms plead "rest" so change weapon to other arm. . . . Tongue huge in mouth, foul dry saltness, can't spit, back all wet sweat, and crotch same so SORE, chopper [helicopter] dust in eyes so same SORE. Who's shooting electricity into knee hinges? 2 (miles) to go, calf muscles zing zing with cramp, thighs same—surges of buzzing, whirring sharpness going through them, up a rise panting like a lot of cattle . . . "you know what it's like now," the lads say, "you must be daft to be here!"

A key lesson drawn from the above experience was how the *enduring* of difficult, unpleasant, stressful, and distressful physical sensations can make us somatically and reflexively aware of how we learn and relearn ways of being a sensory body.

Danger and awareness

At the sensory level, awareness of danger is often deeply corporeal, even visceral. Such corporeal indicators might include, for example, elevated pulse rate, hammering heart, a tightening of abdomen, a hypersensitivity of skin, and shallow and/or quickened breathing. A field note relating to a solo moorland run by Jacquelyn testifies to heightened situational awareness and the possibility of lurking dangers, via intense sensory focusing:

> Decided to take the bracken route down the moor to the track, but as I enter the head-height, dense bracken, I feel hemmed in, trapped, I can't see what's around the corner,

> who might be lurking at the path sides. My breath catches, holds, ears straining for any sound, goose pimples catch the moor breeze, trying to quieten my heartbeat so that I can hear. . . . I have to walk some of the way, the path is too steep, too friable for running, but I'm light and primed for flight as any moorland creature.
>
> *(Dartmoor, England)*

This field note illustrates the role of prior lived experience in sensory situational perception, along with Jacquelyn's extensive socialization into gendered constructions of space, where feelings of vulnerability and danger can inform "women's geography of fear" (Wesely & Gaarder, 2004). Isolated rural spaces are often deemed dangerous and "out of bounds" for women, particularly lone women.

In a similar fashion and in a life-threatening context, the realization that sensory awareness was not heightened enough was hammered home to John by his infantry companions:

> I really screwed it up this morning. Patrol out in Indian file and I got the rhythm and thus the spacing wrong, closed up to the lad in front too much. Nobody very pleased with me, in language not found in seminar rooms! In effect, in their terms, I 'switched off' and put folk in jeopardy from any alert PIRA [Provisional Irish Republican Army] shooter. Basically, thinking too much sociologically when out there and not enough tactically!
>
> *(Crossmaglen, South Armagh, Northern Ireland)*

As noted earlier, disciplinary socialization into particular theoretical frameworks also served to heighten our reflexivity in specific contexts, making us alert to potential dangers. Jacquelyn's feminist perspective, for example, developed prior to engaging with sociology, served to raise her consciousness of gendered aspects of running, particularly when running solo. A field note testifies to her cognitive and sensory awareness of the gendered nature of running in what is purportedly "public space" and the potential dangers of relatively isolated areas for women runners. Such "theoretical" awareness also combined with her lived experience of analogous encounters in rural places:

> Out along the river meadows, quite some way from the city and approaching the weir. Suddenly out of the blue, a red pick-up truck is hurtling its way across the field towards me. Had spotted the truck previously careering across the fields, but within sight and earshot of dog-walkers and others. Now there is no one in sight . . . Is that a shot gun sticking out of the open passenger window? [It's a farming area where guns are common.] I catch male voices drifting toward me on the evening air. Heart pounding in my ears now. Try to steady breathing, better to concentrate. The truck is still approaching down the grassy track, bumping and swaying. I up the pace, pull down my baseball hat firmly and set my jaw sternly . . . Not for the first time, I wish my slight, 5'3" (1.6 m) runner's body were somewhat more imposing. Suddenly, breath-catchingly, the truck veers off the track a few metres in front of me. I hear loud male voices and a radio blaring. . . . Just in case, I up the pace to get out of the danger zone.

Alertness and difference

The nature of habitual sensory routines means they are often taken-for-granted and thus hard to identify. So, seeing difference in such routines and understanding their patterns

of evolvement are not without challenge. In South Armagh, patrol formations (four-man, eight-man, etc.) would be variously: out patrolling, in base guarding it, or in base resting. In the latter periods, troops did "nothing," or in the words of one Private: "we just totally doss." So, eating lots, playing music, watching television, reading, and inordinate amounts of sleep were the patterned ways of resting. The tempo of activities during these periods was at most lethargic. There was, however, an exception:

> Something is going on and I can't quite figure it out. In the ablutions block, which is just a few yards away from the sleeping/eating block. Even the lads who are off duty do everything really fast; namely, washing, shaving, crapping and showering. There is little talking either, just the odd brief comment. So why is all movement in this context so speedy? I ask, and just get puzzled grunts. But a few days later: he (Corporal B.) looks up to the ceiling, raises his eyebrows, points his right index finger skywards, and says "incoming." I know what that means. . . . It means enemy mortar rounds descending. So, I say "so?" and then get a look which tells me I am a "dick-head" (pejorative), followed by B. saying "this place is not hardened" (armoured) and where we kip (sleep) is, got it? So now I get it and similarly do speedy ablutions and retreat to the relative safety of the sleeping area.
>
> *(Crossmaglen Base)*

On occasion, differences to routine sensory patterns are rather more immediately corporeally *felt*, although the cause of that change is temporarily obscured until visual realization is reached, as in the following field note portraying an early springtime training run:

> Routinely we leave the house, run down the road, turn right and then sharp left twice, and straight onto the grassland of the big park. The last week though both of us have been having duff [poor] training runs. Chests, throats, and noses have been accosted: spluttering, coughing and wheezing, but frustratingly we can't figure out why. Relatively speaking, not a lot of pollution about. Saturday arrives, and the first run in the daylight of the week. Suddenly on the way back . . . we spy the tops of large blossom trees flowering: ah ha, so that's the reason for all our spluttering and wheezing!

Such experiences highlight how differences in the habitual "sensescape" (Classen & Howes, 2006) can heighten awareness, including corporeal awareness, so that routine bodily "disappearance" shifts abruptly to bodily "dys-appearance" (Leder, 1990). In the above case, heavily pollinated air from the blossoms provoked respiratory challenges that alerted us to a difference in the familiar environment.

Encountering the sensory new

During both projects, there were occasions when we encountered sensory patterns new to us, and with which we had to contend in situ and rapidly. The reflexivity involved in these processes was facilitated because the patterns were initially novel; there was immediate focused attention to the tasks at hand, which held their own sensory intricacies. The challenge for us was that we encountered a "tipping point" beyond which familiarity with

the processes fostered a more taken-for-granted perspective, as these activities became habitual:

> We have been given by various physiotherapists remedial exercises for our knee injuries. These we have been doing (patiently and boringly) for months and months. We both have the same exercises to strengthen the muscles around the knee and keep the knees as stable as possible. Each exercise has its own sequence of actions. One exercise is designed to strengthen the Vastus Medialis, which extends the knee, and has a three-action sequence. It has taken us some time to learn this sequence properly: pulling, pushing, and tightening the muscle. When we are good, and do it "right," there is a particular tight, blocky feel to it. But the problem is that over time we suspect there has been "slippage" in performing the exercise. We both have a strong feeling that when we fall into doing the exercise half-heartedly or without full concentration, there is no sense of "full whack" tightening. We've come to recognize the danger of losing the correct feeling over time, to the point where we accept the inferior practice as "OK." We also recognize a certain feeling-thinking: we've been doing the same, boring old exercises for ages and can't seem to make any real headway; there's no glimmer of a sign of the knees getting better, and we resent all the time and energy spent in "following orders" to no apparent avail.

This kind of initial, acute, and specific sensory awareness, followed by its dilution and diffusion, was also experienced by John in the infantry context, along with an intimation of potential serious and highly deleterious consequences should awareness decline:

> The boys have been firing the "Charlie G," which is an 84 mm weapon with a lot of punch, used on bunkers, vehicles, armoured personnel carriers and the like. Firing involves two—one firing, and the other loading the projectile. I have been doing the latter. We did it initially in Alberta. The weapon was new to me. Its problem is it has huge back blast which can kill folk immediately at the rear. So, the loader fiercely "cuddles" the firer as firing happens—to be safe and to stabilize the firer. Even then there is a tremendous back blast and one's whole body vibrates hugely, including what feels like one's lungs. Later we continued firing here in Warcop and I was surprised how familiarity breeds contempt so quickly. At the end of the session's firing Sergeant D. told me "Next time John be more careful—you were not getting in tight enough with the firer, we don't want a dead researcher, think of the paperwork!"
>
> *(Warcop, UK, Training Area)*

Concluding thoughts

As has been signaled by ethnographers generally, reflexivity and the reflexive process are vital aspects of ethnographic research (e.g., Bieler et al., 2021; Buscatto, 2016), and this certainly applies to sensory ethnographies and autoethnographies (Allen-Collinson & Jackman, 2022; Hockey, 2021; McNarry et al., 2019). In this chapter, we have explored some of the complexities of engaging in corporeal and sensory reflexivity during two auto/ethnographic projects on the British Army, and distance running, respectively. While very different in topic area, both projects shared a focus on sensory embodiment, including "intense embodiment" (Allen-Collinson & Owton, 2015) experiences.

As Leder (1990, p. 15) appositely notes, unless in pain or discomfort, human corporeality routinely has a "self-effacing transitivity" whereby the body "disappears" from the forefront of our conscious minds and is not an object of our intentionality. During such routine, everyday life, sensory activity operates in the background or at the fringes of our consciousness (Csordas, 2004). Phenomenologically speaking, the "natural attitude" of our habitual, everyday activity "obscures itself and remains unknown to itself" (Moran, 2011, p. 69). The natural attitude, it is posited, can only be exposed by the adoption of a "radical alteration of attitude" (Moran, 2011, p. 69), via engagement in the phenomenological *epochē* or a form of *bracketing* (Allen-Collinson, 2011). For us as sociologists, who have more latterly sought to bring a phenomenological sensitivity to our research endeavors, "bracketing" involves identifying, acknowledging, and bringing to analytic attention (as far as possible) our assumptions and presuppositions regarding the social groups, activities, and cultural contexts that we study. This is no mean feat, and not for the faint-hearted! We would never claim to have totally achieved such a demanding task, one which even the renowned existential phenomenologist, Merleau-Ponty (1962/2001), viewed as problematic. But through the daily building of a sociological "somatic mode of attention" (Csordas, 1993, p. 138) via participant observation and other sensory modes, we have sought to be alert to the sensory dimension, and the sensuousness of ourselves and others when in the field (and outside of it, during our analytic discussions and musings), in the face of the numerous sensory challenges that our research presents to us, including in the two specific projects described in this chapter. Our experience in the field has led us to agree with Atkinson's (2022, p. 131) assertion that "the phenomenological reduction, rendering phenomena strange and hence available for self-conscious scrutiny, is not an instantaneous event. . . . It is something we have to work at, if only to get beyond immediately superficial experiences and responses." Such a challenge required the development of an individual and collective habit of attending to the sensory level of being and happening: a habit that necessitated much disciplining of perceptions—and, interestingly, a disposition fundamental to both the distance running and infantry lifeworlds.

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9

SENSING THE CITY

Multisensory participant observation and urban ethnography

Cristina Moretti

When one of my key mentors and interlocutors taught me about how he observed his city during my fieldwork in Milan, Italy, I was surprised by the sensory experiences he engaged with. Don Felice, a young student who had migrated from Mexico, urged me to notice how inhabiting the city was akin to swimming. He described "bathing" in fluid lights, advertisements, and window displays and traveling through the city's immersive, watery, and tactile visuality (see Moretti, 2015). Moving and sensing like water was his preferred way of learning about Milan, and he urged me to think with and to follow a river to understand how urban spaces are performatively constructed, and to participate in their everyday forms. His sensorial experience of navigating streets, histories, and chance encounters spoke to both belonging and exclusion: swimming was a way of feeling himself part of the city; it was also a strategy for receding from hostile environments or flowing past borders. He also encouraged me to sense the heat of the street created by the improvisational interaction of many people, and he described parks as acoustic realms (Moretti, 2015).

A keen observer of spaces and people, he taught me that observing meant sensing the city in very particular ways. At the core of his analysis was the realization that sensing was eminently social (Culhane, 2016; Howes, 2019) and deeply shaped by the city's disparities. His observations and embodied experiences of public parks as familiar acoustic domains contested a sensory perception that equated the use of green spaces by non-white inhabitants with a messy and out of control sociality (Ramírez, 2019).

Although I did not realize this at the time, his lesson about sensory observing deeply shaped how I approached public space, visual cultures, and urban transformations in my research. For one, his stories and invitations to sense in particular ways helped me rethink the role of vision and the way I understood it as part of ethnography. For as I sat in Italian plazas, taking notes on what I saw happening in front of me, I realized that I had carried to my field site a model of participant observation as a primarily visual practice of watching and noticing. This understanding foregrounds a distance between the viewing and observed subjects, reinscribing the idea that I could (or should) be an uninvolved observer. Moreover, thinking of vision as a simple and generalized capacity, I assumed that I already knew how to see, and that it was just a matter of opening my eyes to new contexts.

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Walking and sensing with my fieldwork guides and mentors led me to ask: what happens to a method that I so easily imagined as ocularcentric when the stories I was listening to, and the observations I was involved in, emphasized the importance and particularity of multiple sensorial engagements? What would observation of the city be like if it were immersive, fluid, haptic, and kinesthetic—always a learnt relationship rather than already given or universal?

The particularity of Don Felice's sensorium complicated observation in other ways too. Suddenly, I was not the only one doing the observing; rather, my interlocutors were the ones teaching me about observation. Unlike "adding the senses" to a primarily visual participant observation, paying attention to the urban sensorium changed the way I thought of vision and the method itself, foregrounding the always relational, partial knowledge of ethnography. I have thus become less interested in multisensorial observation as a method practiced by an anthropologist and more interested in understanding how the kinds of observing and sensing practiced by the people I meet and learn from can counter a universalizing of sensing (Robinson, 2020) and gesture toward the particular and the situated—what I call "the middle of things." Put somewhat differently, the stories of my interlocutors do not help me see what is "really going on" in the city. In fact, their critical potential lies exactly in that: to muddle the field of plans and imaginings that are too well set. They point, instead, to small moments at the edge of things, times, and places to counter some of the generalizations of urban growth and real estate narratives (Finkelstein, 2019; Ghertner & Lake, 2021).

Keeping these complexities foregrounded, in this chapter, I approach sensing and multisensorial observation as a mode of questioning in urban anthropology. To do so, I follow three women's sensed stories and observations of gentrification and housing precarity. I am particularly interested in how these address places "in between" and in transformation, and constitute openings for my interlocutors to participate and intervene in urban debates. As Calvillo argues, sensing is always more than perceiving and getting to know urban places or situations. In order to expand "a limited understanding of [sensing] as a way of producing knowledge" (2018, p. 375), we need to ask how sensing, as a practice of being in place, also shapes what can be said, understood, contested, and debated from very particular social locations. In Calvillo's words, it asks how "the transformative capacity of sensing . . . makes visible" the kinds of interventions and commentaries that different inhabitants bring forth (2018, p. 375).

Secret rooms, resounding voices: sensed stories of housing and urban change

Urban scholars have described some of the complex links between the senses and urban change, including displacement, gentrification, and people's embodied experiences of dwelling in transforming urban communities. The policing of the city sensorium can become a tactic for displacing communities of color and low-income residents. Senses are enlisted to make spaces desirable to certain publics, often in conjunction with green gentrification (Checker, 2011), appealing to the taste and desire of more affluent inhabitants. The sensory politics of who is making "too much noise" (Ramírez, 2019) and which acoustic practices are deemed to belong to which urban spaces are instrumental in facilitating gentrification and reveal much larger systems of inequality and white supremacy (Alves, 2018; Partridge, 2022; Williams, 2021). This occurs in the contexts of large-scale events, city-led programs to clean

up undesirable areas, as well as everyday engagements in public spaces. In turn, Ramírez (2019) and Medrado and Souza (2017) show how people use sound itself—a drumming demonstration by Black Oakland residents and Carnival music in Rio de Janeiro's favelas—to confront police violence and continue to resist displacement from their own neighborhoods.

Sensorial politics are so important in processes of gentrification because the "value" of urban spaces is also created, shifted, and perceived by different social actors through the senses (Birdsall et al., 2021). Gentrification is embodied rather than just a process involving the built environment. From shifting belly-dancing practices in Istanbul (Potuoğlu-Cook, 2006) to tasting coffee and Caesar salads in Cairo (De Koning, 2009), sensing is part of the practices of emplacement and consumption that over time shift local ideas of who is entitled to inhabit certain city spaces, and how. An attention to the senses helps us research and critique commodification in cities (Birdsall et al., 2021). What Fiore and Plate call "sensorial politicization" (2021, p. 394) in their example from Amsterdam can take the form of regulating the smell, look, and tastes of a working-class area to transform it into a sanitized arena of white consumption. Sensory memories and the affective sensorium of infrastructure are also fertile starting points to critique the creation of global cityscapes and aesthetics. Finkelstein (2019), Gupta (2021), and Chatterjee (2020), for example, pay attention to multiple sensorial experiences to reveal the paradoxes and political complexities of new landscapes of affluence in India—including growing inequality, social and historical displacements, and tensions between "disjunct, yet adjacent, histories and temporalities" (Appadurai, 2000, p. 627).

These studies make a number of important interventions. First, they show that sensory regimes shape, reproduce, and complicate urban inequality. In turn, the senses and sensorial emplacement can be harnessed as points of departure for resistance and for questioning narratives of urban change. Second, sensing encourages an attention to space, which interrogates the scalar practices and politics at work in the city. Ordinary, everyday sensory engagements and conflicts are linked to wider, often global, processes. Third, listening to how inhabitants sense and make sense (Howes, 2019) of the city can show paradoxes that may be difficult to see otherwise. Here, the sensorium and residents' sensory "archives" (Gupta, 2021) reveal a place to start asking questions about who has rights to the city and who benefits from which urban changes.

This chapter contributes to these conversations by asking how the sensorial engagement of the inhabitants I met during my research help trace the "granularities" (Biehl & Locke, 2017, p. 4) of life in cities and some of the dilemmas and contradictions of urban redevelopment (Kolling & Koster, 2019; Lanari, 2019). The moments I present here speak to three women's senses of housing precarity and lived dimensions of urban change. Theirs is a storied sensing and a sensed storytelling. My mentors and interlocutors invited me to sense stories of places by guiding me during walks and asking me to see, hear, or feel elements of the urban environment. They shared their stories of sensing by evoking how places and situations felt and reflecting on how they learned to make sense of particular aspects of urban change. In attending to the connections between narrating, remembering, and sensing, my intention is not to reintroduce a Cartesian duality between body and mind, but rather to privilege my interlocutors' embodied and performative enactments and their remembered "sensorial histories" (Gupta, 2021, p. 286).

Here, sensing the city and narrating as a sensory practice are close to what Choy and Zee propose as "a form of attention that is also . . . a way of being suspended," a method of listening to others "that works to render staid common sense into an opening of possible worlds"

(2015, p. 212). It is in this way that I ask you to consider my interlocutors' experiences of learning to sense the city: more an opening to questions and perspectives than a grasping and explicating of urban realities.

Milan, Italy, winter 2009

I follow my walking guide—an elderly, working-class woman living on a small pension—through the streets of her neighborhood. Eliza has just finished telling me about life in an area of the city that once hummed with machines and where the factories were the fulcrum of everyday life (for more, see Moretti, 2015). Looking at the café a few meters from us, she evoked the shift she witnessed in her youth from listening to TV programs with others in public spaces—the local café, the street—to private practices of television viewing. As we now stand on the street to hear absent sounds, her stories of listening and of silence feel less a description than an embodied and performative "walking with sound."

Still pondering the shift from public to private acoustic ecologies—which parallels the rapid industrialization and wider economic and social transformations happening in Milan in the 1950s and 1960s—we arrive in front of a large building, and Eliza points to the intercom on its door. Many minutes go by as the object gathers all her attention. She pauses in amazement and urges me to scroll through its many rows. On the large golden plaque, each name is neatly contained in its rectangular section: one or two words and a button for each entry. After a long pause, Eliza tells me stories of her childhood and youth on these streets and contrasts the noise of life in this and other very dense buildings, which once had communal courtyards and restrooms, with the current, quieter residential enclosures and the private sounds of its apartments. From where we stand, look, and listen, this building is a perfect example of such a remodeling and transformation. Looking and listening with Eliza, I realize that the intercom by the front door is now an apparatus for filtering sound as well as a visual representation of parceling what was previously a working-class living space into gentrified apartments.

Through her sensing and her practice of attuning to the complex interplay of seeing and hearing, Eliza is teaching me how vision is replacing sound. In her stories of shifting acoustic emplacements and her invitation to observe and listen together, the metal registry becomes a visual representation of inhabiting and of urban change. It is the realm of the orderly grid of separate lives and rising affluence, set against the resounding, remembered voices that shared a space marked by both conviviality and strife. The way the intercom for Eliza is reduced to vision also highlights her sense of being an outsider to this new structure of the neighborhood, and her experiences of being slowly outnumbered by the new residents.

In Eliza's stories and our shared sensing, sound—remembered, evoked, and absent—is uncannily effective in conveying the historical turns of industrialization and de-industrialization. These shifts are social and political, as well as embodied and sensorial: a set of relations inextricably linked to factory rhythms and lives (Muehlebach, 2017). Multisensorial engagements can also be a generative way of attending to "in-between" urban spaces—areas that are being constructed, demolished, or are in a process of "becoming" (Biehl & Locke, 2017).

Moving from Milan, my current research in Vancouver, Canada, asks how tenants at risk of renovictions refer to the senses and their sensorial observations to talk about redevelopment. In the next two anecdotes, follow me to a very different urban context somewhat later in time.

Vancouver, Canada, summer 2022

A young woman who moved to a shared basement accommodation, only to be renovicted four months later, evokes her amazement when walking through the upper floors of the house she was living in just before demolition. She describes moving in a space that would be torn down soon and realizing that there were "secret side-rooms" in all the bedrooms:

> [T]hese old houses have character that the newer ones getting developed don't . . . The inside [of our house] was really cool. . . . Our garden was amazing. . . . The house was . . . normal looking, but the inside . . . [had] little secret rooms that were attached to all the bedrooms, each one had kind of its own little side-room. . . .
>
> I was exploring that as it was getting . . . stripped before the demolition . . . it was . . . half torn down . . ., or the inside, I guess, was stripped, so the inside was looking demolished and the outside still looked normal . . . and then the whole thing came down really quickly after that, within a couple of days. . . .
>
> Capitalism makes these things happen—. . . if we lived more in a culture where we . . . used things to its maximum use before throwing it into the garbage, then—I like using materials to its full life span, and using everything, so it's hard for me to watch this kind of stuff happening. So damaging to the environment also. . . .
>
> And how many people lived in our house . . . it had six or seven people living in that house at one time, and then I wonder how many people will move to that [new] property—probably not that many. . . .
>
> It was so weird being the last tenants, like my roommate and I were talking about this—like being the very last tenants in a house that had been there since the 30s. . . . We were thinking of all the different families and generations that lived in this house. Because we lived in the basement and we had a concrete floor, and there was like, *hand-prints* of children, in the floor . . .
>
> So we were looking at all the traces. And then you would look in a nook somewhere, and there would be phone numbers written down . . . on wooden beams—but they would have way less digits so we knew that it was an old phone number. . . . And the handprints in the cement—so we were, wow, this house was really lived in.

A central issue Laura pointed out during our conversation was the demolition of older buildings like this one that serve as affordable rentals, being replaced by more expensive houses or townhomes. The demolition of her house—despite the fact that it was fully inhabitable and had a unique "character"—mirrors the way tenants like her are often considered irrelevant, and the ease with which they can be displaced. In her narrative, sensing constructs an archive of inhabiting amid precarious housing and also shows the city "as archive" (Finkelstein, 2019)—in its materiality, as lived space, and as an ongoing process of "becoming" (Biehl & Locke, 2017).

Evoking the moment of transition "as it was getting . . . stripped before the demolition" and was "half torn down," she highlights the paradoxical position of being detached from where she lived, because she was a tenant and thus had no ownership or control over the building, and her lived, sensorial "being there" of inhabitation. Housing insecurity is here a nexus of connections and disconnections (Fobear, 2020) countering discourses of development and urban change in which tenants are simply imagined as not being rooted in place (Blomley, 2004).

Sensing as inhabiting—and inhabiting as sensorial engagement with place—shapes her response to what she sees as wasteful redevelopment, the way "capitalism makes these things happen." In her story, the experience of finding and touching the cement shapes of hands that have gone before constructs a moment of incommensurability. Housing and inhabiting cannot be reduced to a commodity or numbers of units, but are rather a relationship developed over time within complex histories. Engaging with, yet also always exceeding, a critique of urban redevelopment, Laura's sensorium of demolition and gentrification point to precarity and the lack of affordable housing by activating the unknown, the imagined, and the fleeting moments of change, the way the house folded itself over.

Vancouver, Canada, spring 2022

Consider, too, how another one of my interlocutors shares her "sensing and making sense" (Howes, 2019, p. 17) of current and anticipated changes in her neighborhood, and her growing feeling of precarity as a tenant. Sophia, a working, single mother has been renting an apartment in Vancouver for many years, but is now worried about renoviction due to the Broadway Plan redevelopment. This project will facilitate the creation of new residences, including high-rise buildings, along a new subway line that is currently being constructed. Advocates for the changes point out that this will result in many new accommodations. Vancouver in fact needs more rental housing, both now and in the future, as its population will continue to grow (Gurstein & Yan, 2019).

Opposing community groups and individuals, however, worry about replacing older affordable housing with more expensive rental units in a city that already has the highest accommodation costs in Canada (Gold, 2022; Grigoryeva & Ley, 2019). They argue that existing tenants will be displaced and worry that new regulations intending to protect renovicted inhabitants will be ineffective, due to the lack of enforcement, the powerful position of developers, and the very high cost of the rental market overall. These safeguards, according to the Vancouver Tenant Union (2022), "are only designed to ease displacement, not prevent it" (p. 12). As the current market rents have grown much faster than allowable rent increases (p. 2), long-term tenants like Sophia, who raised her two children in an affordable rental, will be faced with much higher costs if they have to leave their building, and they will find themselves in a precarious position. Housing insecurity is a central problem in Vancouver and it might not necessarily be alleviated by increased supply, as it is "difficult to ensure that such housing is affordable, adequate, or suitable" (Gurstein & Yan, 2019, p. 222).

Different understandings of sustainability are also at play here. On the one hand, rapid transit is part of Vancouver's plan to increase sustainable travel options. A denser corridor can allow people to live in the city, reducing long commutes and carbon emissions from private cars, and countering urban sprawl (City of Vancouver, 2022). These are key objectives in the current climate crisis. On the other hand, new constructions and redevelopments centered around public transit and green mobility can lead to gentrification, as Edelson et al. (2019) document for several areas of Metro Vancouver. Environmental considerations and discourses of sustainability can foster commodification and speculation (Mendez & Quastel, 2015; Rice et al., 2020). Opponents to the Broadway Plan are also concerned about the environmental impacts of reducing to waste many existing, inhabited buildings to construct new concrete towers.

Sophia's complex position—as a tenant who has access to affordable accommodation and yet fears being displaced by a development that is meant, among other things, to make

housing more affordable—shapes her sensing, and learning to sense, a particular urban space. As Feld writes, "as place is sensed, senses are placed; as places make sense, senses make place" (Feld, 2005, p. 179). Echoing Eliza and Laura, Sophia's description of the transformations on Broadway, her neighborhood adjacent to it, and the city more widely is an invitation to listen to changes in sounds and to sense the textures of inhabiting:

> I used to always bump into friends along Broadway and have long conversations . . . but now it is getting too noisy and we cannot hear ourselves talk. So, whatever has happened with the streetscapes—bigger cars, or just, you know, more constructions, or the way they developed it—whatever is done to the sound [means that] you actually cannot hear people in the streets. . . . It is the actual physical buildings: they create a kind of sound corridor. . . .
>
> Before you had lower buildings . . . now it is very concrete, it's really super hard surfaces. . . . I know when you walk on a concrete surface, it takes all your energy, you don't get any energy back, so when you walk on softer ground, you know the way physics works, you go down and it goes up, so you have this relationship, right? . . . So I think the sound might be stopped, and then it doesn't go anywhere else, like it stops there . . . I don't actually know what it is.

One of the aspects I found particularly interesting is how Sophia attends to sound as a relationship. Starting from the exchange between embodied, moving inhabitants and the materiality of the built environment, she invited me to think of "place as heard and felt . . . sounding or resounding" (Feld, 2005, p. 182). The movement of sound—resonating among people, places, journeys, infrastructures, and objects—became also an invitation to think about the role of seasonal change as part of the urban sensorium and as a relational "aliveness." Showing me one of the building sites, at that moment a massive gap in the ground encircled by gray concrete retaining walls, Sophia remarked:

> What is changing? You can see this: . . . it's noisy, and . . . we know that it [this new building] will be a big barrier, right? There is nothing fluid or changing about a building—like, a tree is different through the seasons, and it grows, it's always dynamic, right? The light on a leaf and against the sky . . . you can feel that, there is an aliveness there that feeds you. . . . You do not get that from a building, a building does not change, once it's there, it's there, and nothing changes it. . . .
>
> You have these squares [in other cities], right? And those are constantly changing, you know, and it's an open space where people can interact . . . and even though it is just a flat place . . . it allows all these things to occur, it is dynamic . . . and things change there with the seasons too, and the markets . . . It is an empty space, but it is open to possibilities. But what we tend to build here, it is just this closed thing . . . we are stuck: there is no option of being dynamic. . . .
>
> One thing I learned is how many houses are uninhabited and remain uninhabited. . . . And you can tell because the fences have just fallen over . . . and there are houses . . . that have actually never been lived in, and have been sold, and bought, a number of times . . . that kind of flipping thing. . . .
>
> The learning to recognize whether a house is occupied or not, its' not always easy to tell. . . . It's . . . specific to the place . . . nothing is ever disturbed, there is never anything happening . . . there are no footprints anywhere, no fingermarks. . . . I am

> all over the city and there's so much *emptiness*. So, you have these . . . *big* houses, very empty, empty, empty areas, empty buildings . . . But there is nothing going on there. There are these huge houses going up . . . but the streets are all dead.

Describing her journeys on foot, bicycle, and public transit throughout the city, Sophia expressed her amazement when gradually attuning to what she described as different kinds of emptiness. She recounted learning through chance encounters with other inhabitants about their sense of disorientation or loneliness—in settings ranging from people's homes to city streets, and from high-end neighborhoods to urban spaces in transitions. An example of the latter is Oakridge, where an older mall was torn down to make space for an extensive new development and the construction of a Municipal Town Centre (City of Vancouver, 2018).

> [There is this] huge intersection—and they've just torn down Oakridge [mall]—the people who live around there actually have no amenities. So I have actually met people walking on these really busy streets looking for a place to do their dry cleaning or something like that, they have to walk for miles for groceries. . . . There is lots of traffic—big trucks, massive trucks—but in terms of . . . energy of human beings, there's just no, no real street thing. Even if you have all these new buildings, there is no energy of life. . . .
>
> So you can have . . . it [emptiness] where you have these big—and getting bigger—single family homes. But you have it also where they are building density . . . because . . . there is not a reason for people to come down the buildings to be in the streets.

Sophia's attention to the fluidity of forms, the liveliness of seasonal changes, the movement of sound, and the sensorium of emptiness is part of her worry that gentrification will displace long-term tenant communities. While an analysis of urban change and redevelopment in Vancouver is outside of the scope of this chapter, I wish to point out that the very learning to sense spaces and transformations is for Sophia also an intervention in debates on gentrification, affordability, and density. The latter, in particular, emerges as a key dilemma. In her observations, emptiness denotes very different situations. It characterizes luxury houses because they are not "dense enough"—they take too much space, they are unaffordable to most residents, and they are detached from the life of the city. Emptiness foregrounds ruptures in space and time in areas seeing long-term, large-scale redevelopments. Emptiness also marks the building of new residential towers where density does not necessarily bring people into relation with other inhabitants because she sees it as eroding infrastructures and spaces that tenants like her have been relying on. These include affordable stores, community meeting locales, and children's spaces. In this context, her sensed everyday movements in the city are a good starting point for considering how new apartment buildings can often create enclaves by constructing rooftop amenities, children's playrooms, and privatized "public spaces" that tend to separate residents from the surrounding neighborhood. Several of my interlocutors, for example, decried the cutting of trees on the streets during demolitions, and planting new ones on balconies and rooftops where only the residents of expensive condominiums can appreciate their shade during hot summers.

Sophia's sensing—and learning to sense—emptiness makes "perceptible" particular aspects of redevelopment (Calvillo, 2018, p. 374). In doing so, it opens a space for questioning how housing is understood, planned, and built, and who will benefit from current initiatives to create more housing. Thinking of sensing as more than knowing, and as an intervention in

urban debates, can help illuminate how complicated density can be, and can be a starting point to interrogate the ways it is approached, lived, and sensed by different inhabitants. Calvillo's theorization of toxicity and the senses in Madrid, Spain, provides a fertile way of thinking about this. She writes, "toxicity was not a quantitative, but a qualitative condition distributed in space and time" (2018, p. 376). Like toxicity in Calvillo's example, density is much more than a growing numbers of units in a changing city; it is a "qualitative condition" that has particular dimensions and means different things in different places and from different social positions.

I do not want to imply that the number of units does not matter. In Vancouver, lack of rental housing has dire and direct consequences on homelessness, affordability, and displacement (Gurstein & Yan, 2019). Numbers, however, and current discourses on densification can ignore important issues of who is profiting from redevelopment and who is displaced. To complicate matters, arguments against density as ruining the atmosphere of a neighborhood can serve to limit the building of social housing or accommodations for people who experience homelessness. We can ask: Which density is celebrated and used as a measure of sustainability, and which densities are cause for alarm and police interventions? When and in what ways does density as a desirable feature of neighborhoods legitimize gentrification? If the density of a homeless encampment can be spectacularized as signs of extreme poverty and marginalization (Taghaddosi, 2022), so too can density become a cure to unaffordability—without necessarily considering just how affordable the new apartments will be, and for whom. In this context, Sophia's sensing of emptiness as a complex, embodied, and shifting category can be a fertile starting point for wider questions.[1]

Conclusion

Taking my guides, mentors, and interlocutors as teachers of multisensorial observation, how do their stories of sensing and their sensed stories redraw the roles of sounds, textures, and sight with regard to being in the city and participating in urban debates? What openings and contradictions do they point to?

Eliza, Laura, and Sophia address gentrification and urban change as intervening in and/or generating new sensory regimes[2]. Attending to these shifts—that are material, embodied, social, and cultural—requires a multisensorial engagement with spaces and transformations. Similar to Don Felice's observations, Eliza's, Laura's, and Sophia's sensed storytelling and commentaries do not map neatly onto five senses. They cannot be separated into distinct domains that can each be used to gather information (Howes, 2019). In Eliza's recollections, the intercom ceases to be just an instrument of sound: it becomes a sensorial time machine, a visual representation of present silences and absent noises brought into being by new forms of inhabiting. In Sophia's words, memory, movement, and reciprocity complicate hearing, seeing, and touching, as buildings are situated between echoing spaces and fluid seasonal changes. Rather than simply heard, sound is multilayered and shifting, and includes past aural histories and practices. For Laura, sensing the textures of demolitions, including the imprints of numbers and hands on old wood and cement surfaces, can become an exercise in speculative pasts and futures.

Importantly, my interlocutors present all of these as practices of attunement over time. Here learning to sense does not easily congeal into knowing; it is rather animated by what remains unanswered and/or surprising. It suggests a form of inquiry that draws from multiple interruptions and a suspension of what is, or was, familiar. In my research, listening to

my guides' and interlocutors' storied sensing and sensed storytelling helps me to forefront the sense of amazement that I find so central in their multisensorial engagements. For Eliza, Laura, and Sophia remembering, moving in, and attuning to the sensorium of new gentrified spaces and everyday urban transformations open spaces for moments of surprises. These link their individual journeys to wider debates on gentrification, affordability, and density, and interrogate the lived impacts of urban change to reflect on their sense of precarity.

To say it somewhat differently, what I wish to learn from my interlocutors is the sensorial as a mode of questioning rather than apprehending. What strikes me in the commentaries of Eliza, Laura, and Sophia is this perception from "the middle of things"—the street between buildings, the glimpse of a silent intercom resounding through historical shifts, the moment before a house collapses, the felt layers between generations. Here, sensing is always particular and situated: in front of a new building or a tree; in the middle of a busy city block while in conversation with others. These are nexuses at the crossroads of particular connections and trajectories, knots in the giving and taking of a body in its urban web. Theirs is not a general view of the city or of urban change. Yet it is exactly these fleeting, small commentaries anchored by a multisensorial emplacement that bring the possibility of critique. They point to the creases and frayed edges of redevelopment. The multisensorial engagements of my interlocutors make more apparent, as well as question, some of the discourses and imaginaries of urban growth. They speak to the shape, time, and forms of what is changing, the shifting contours of housing insecurity, and the particularities of dwelling in place. They are also a way of enlisting, sensing, and thinking with the incommensurable, the anticipated, and the unexpected—and their liveliness in complex processes of urban transformations.

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Notes

1 It is important to note that Sophia and Laura are in relatively privileged positions. They are both white, working, and, at the moment, have access to housing. Their situation is thus radically different from the precarity experienced by hundreds of unhoused residents in the city. Yet their position is indicative of a wave of displacements that is and will continue to accompany current redevelopment.
2 Thank you to Noah Quastel for this observation.

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10
TALKING ABOUT FELT SPACES
On vagueness and clarity in interviews

Mikkel Bille

As an ethnographer, I am interested in understanding how luminosity shapes feelings of spaces, the atmospheres. That is, not just an interest in the cultural role of vision (Edwards & Bhaumik, 2008) but also the technologies, norms, and practices of making the world visible and felt (Bille & Sørensen, 2007). Encountering and partaking in an atmosphere, alone or together with others, is a multi-sensuous engagement with weather, materiality, light, smell, and sound in a movement to, through, and from a place. And atmospheres are, of course, reliant on people's biographies and meaning-making practices. They exist in shapes that are sometimes very clear, imposing, and distinct, even if temporal (a funeral, disco, eerie street, majestic architecture), and sometimes go unnoticed in the background of attention (a street, an office, a home). In recent scholarship, atmospheres have been described as ontologically vague and ephemeral phenomena: neither determined by the material world, nor merely in the minds of individuals, but emerging as collective situations in the sensuous co-presence of attuned human and non-human bodies (Anderson, 2009; Böhme, 1993, 2017; Stewart, 2011). As Böhme notes, "Atmospheres are always spatially 'without borders, disseminated and yet without place that is, not localizable'. They are affective powers of feeling, *spatial bearers of moods*" (1993, p. 119).

Even though they are vague in terms of location and temporality, they matter, for instance, in consumption practices, in interior design, home-making, social gatherings, etc. People's practices may shape atmospheres (Bille & Simonsen, 2021), even if they are merely something vague "in the air." As Sørensen notes, vagueness is "a condition through which humans sometimes experience the world, orient themselves and upon which they make decisions" (2015, p. 742). Even if atmospheres may be clearly felt, they may not be fully articulated in words, forcing researchers to consider how to observe, describe, analyze, and theorize atmospheres beyond the words of research participants (Anderson, 2016; Bissell, 2023; De Matteis et al., 2019; Löfgren, 2015; McCormack, 2018; Sumartojo & Pink, 2019).

However, people *do* talk about atmospheres, and often as a central part of social situations: the cozy restaurant, the serene landscape, the creepy corner, the eerie tunnel. This chapter discusses sensory aspects of atmospheric experiences by attending both clear and vague articulations in interviews. Attending interviewees' words, however, is not unproblematic. Words are representations of the phenomenon in question and are often spoken "after the

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fact." Interviews can be critiqued for not producing stable attitudes or values beyond the interview situation itself. Furthermore, a critique has been raised from a non-representational theory approach that naming or putting words on atmospheres, "would from then on be housed within the unity of a name. What would supposedly be lost is precisely atmosphere as a condition that exists ambiguously" (Anderson & Ash, 2015, p. 37). In this line of thinking, we need to be cautious with the participants' words, as well as how they are used and quoted in research (Bissell, 2023; Vannini, 2015). Pinning down cultural geographers in particular, Thrift critically notes how "wedded they still are to the notion of bringing back the 'data,' and then re-presenting it (nicely packaged up as a few supposedly illustrative quotations), and the narrow realms of sensate life they register" (Thrift, 2000, p. 3).

So, should we just abandon using or quoting participants' words? Taking a more pragmatic approach, we may also note that words and quotes nonetheless offer "something." And what if we took this "something" more seriously? This is the case in the recent so-called *ontological turn* (Henare et al., 2007; Holbraad & Pedersen, 2016) where participants' quotes often become ontological statements: "Instead of treating all the things that your informants say of and do to or with things as modes of representing the things in question, treat them as modes of defining them" (Holbraad, 2011, p. 12). Words make worlds. This could also be a tempting stance toward participants' words. When doing interviews on atmospheres, research participants often offer short but clear responses like "safe," "cozy," or "vibrant" that may come to define a place (cf. Bille, 2015). However, participants often fumble for words and search for details in the surroundings to explain what it is that makes it feel in a particular way. They may even need a bit of teasing out by the interviewer to get to a better understanding of their sensory world. And then there are many times where participants simply do not know or cannot articulate their (sensuous) lives, and the researcher must accept that they cannot get any closer through interviews than the vague words they got.

Obviously, words, even vague ones, can help tease out sensory categories and values that people live through, including those that do not adhere to the five sensory organs paradigm. Categories may differ tremendously across the world and in time, which help us ask new questions about the sociocultural life of senses (Desjarlais, 2003; Geurts, 2002, p. 17; Howes, 2022). What places feel like then are, on the one hand, obviously sensorial in that they invoke sensory experiences that may matter, and, on the other hand, they raise epistemological questions about how we can *know* something about them and how to present them. Atmospheres are real, yet in different ways than more solid bodies, and more characterized by a sensuous vagueness. Griffero notes that this vagueness raises the important question of whether the atmospheric description participants and researchers articulate designates a given situation in a *vague way*, or a vague entity in a *precise way* (2014, p. 7): a distinction between what he calls semantic (*de dicto*) and metaphysical (*de re*) vagueness (see also Deemter, 2010; Spuybroek, 2005; Sørensen, 2015). This chapter shows how the distinction between *semantic* and *metaphysical* vagueness offers a pragmatic approach to what participants say, which acknowledges the importance of cautiousness toward fixating an ephemeral experience as well as the certainty of participants' articulations of the nature of the world.

While theoretical elaborations of atmospheres are dominant (Anderson, 2009, 2016; Bille et al., 2015; Böhme, 2017; Griffero, 2014), methodological discussions of studying atmospheres are scarcer (cf. De Matteis et al., 2019; Hasse, 2015; Löfgren, 2015; Michels, 2015; Rauh, 2012; Schönhammer, 2018; Sumartojo & Pink, 2019; Thibaud, 2002; Vogels, 2008). Accepting that there is something about atmospheres that are beyond words, this chapter nonetheless explores how people talk and make sense of their sensory experience

of atmospheres in words. Focusing on two exemplary interview excerpts highlighting the feeling of bringing atmosphere to a home through lighting, and the eerie sense of an urban square, my argument is that by carefully attending to the clarity and vagueness of research participants' words, we can get an understanding of the sensory and felt experiences of spaces. It shows not so much what atmospheres (in part) *are*, but rather what they do affectively, and what they in normative terms *should be*. I thus argue for embracing interviews on sensory experiences by not only taking clear words at face value, but equally attend the vague ones. Before presenting the two examples, I will outline approaches and critiques of interviewing. Finally, I reflect on how interview faults may elicit analytical curiosity and are central part of learning interviews as a craft.

Interviewing about the senses

The ethnographic research interview offers qualification of views and values (Brinkman & Kvale, 2014; McCracken, 1988; Spradley, 1979), particularly when it comes to sensuous aspects of life (Pink, 2009, pp. 81–96). However, critics have also warned against placing too much weight on it as a witness account on the experience of reality, not to mention that interviewees may lie or tell incomplete stories (Murphy et al., 1998, pp. 120–122; Pink, 2009, p. 81).

An interview focusing on the senses is in many ways like other interview types or foci and faces the same challenges. The interviewer needs to be flexible, allowing the context to influence the techniques and interview styles, and be empathic, build rapport, and engage in active listening to elicit sensory norms and lives (see Desjarlais, 2003; Geurts, 2002). The interview may take many shapes, from formal and structured, to more conversational, and indeed need not be static but can take place while moving around on foot or in a vehicle (Kusenbach, 2003, 2016; Lee & Ingold, 2006; Spinney, 2007; Stevenson, 2014). One thing highlighted by interviews focusing on the senses is however that the value of being present with the participant in their environment is even more pertinent to get a feel for the sensory aspects of their lives, spaces, or objects. While virtually mediated interviews also increasingly show fruitful potential in post-COVID-19 fieldwork (Barker, 2022), there is nonetheless a multisensory aspect with interviews about the sensory that is lost when not present to achieve an embodied way of knowing. The interview focusing on the senses is thus also a slightly different kind of interview and not merely in terms of content, but also in the role of, for instance, the materiality and corporeality of the situation (Harris & Guillemin, 2012; Mason & Davies, 2009; Pink, 2009, pp. 81–96; Stelter, 2010). Pink makes the point that the interview situates the interviewer in a setting, and thus becomes engaged in the participants' sensory world. She writes:

> First, I conceptualise the interview as a multisensory event and, as such, a context of emplaced knowing. Second, I suggest that it is a process through which we might learn (in multiple ways) about how research participants represent and categorise their experiences, values, moralities, other people and things (and more) by attending to *their* treatments of the senses.
>
> *(Pink, 2009, p. 81)*

This type of interview thus holds the promise of an entry point into cultural worlds, through a focus on the senses, as well as an understanding of people's representation

of sensory impressions (Belek, 2019; Dubois et al., 2021; Howes, 2022, p. 127; Pink et al., 2015).

Another line of critique of interviews revolves around how they are presented, rather than what can (not) be drawn from them (cf. Bissell, 2023). In a three-piece analysis of the role of ethnography in human geography, Hitchings and Latham (2019a, 2019b, 2020) observe how in contemporary publications interviews are simply a taken-for granted method that is rarely justified (2019a, p. 396). They notice, for instance, how answers are given while it is not clear to what question. They argue that this "invisible interviewer" is caused by the current quotation cultures where

> if they [the interviewees] are simply "telling us how it is," then we don't need to talk about our presence; if they are "giving us a window into their world," why spoil it with discussion of how the window was opened?
>
> *(2019a, p. 395)*

Similarly, the question of problems and faults in conducting fieldwork is neatly glossed over, they argue, through the construction of an "elusive ethnographer" (2019b). These critiques are highly relevant to the sensory ethnographer, and rarely do we hear much about the ethnographer or the broader context of the interview situation (but see Desjarlais, 2003; Geurts, 2002).

Furthermore, there are ethical concerns about talking about sensory impressions, for instance, in traumatic contexts (Werner-Thomas, 2022, p. 112), and the basic premise that there are themes that escape narrative accounting, such as "the pre-reflective knowledge and practices of the body, or the most trivial details of day-to-day environmental experience" (Kusenbach, 2003, p. 462). Kusenbach continues:

> It is not possible to access all aspects of lived experience in interviews because informants refuse to talk about certain topics or cannot talk about them because, no matter how much they may wish to collaborate, they overlook issues that do not figure prominently in their awareness.
>
> *(2003, p. 462)*

At best one may try to elicit such tacit knowledge through props or technologies, or pointing out material objects or sensuous elements in the context of the interview (Gore et al., 2012). However, some things simply cannot be verbalized and one needs to attend to "the inadequacy of a dependence on talk in understanding human interactions" (Pink, 2009, p. 82).

In spite of this, I also remain pragmatic, particularly when it comes to sensory ethnography, in that interviews offers *one* way to get insights into the categories that people use and the values they display with regard to sensory impression: not only about what is sensed but also about what normatively *should* be sensed. I thus follow Hitchings, in arguing that "interviews offer such an efficient means of understanding how it is to embody certain practices . . . Encouraging people to talk about their practices may not always be easy, but that does not mean it is not worth trying" (2012, p. 66). Prompting people to talk about what is taken for granted, such as sensory experiences, norms, and values, may provoke reflection and contemplation about what is otherwise in the background. My aim is thus not to reduce or ignore the complexity of experience of space, but rather to put participants' clarity and vagueness up front, as the following examples illustrate.

Talking about cozy spaces

I was doing fieldwork in a neighborhood of small, detached houses in the suburbs of Copenhagen around 2010. It was the initial pilot phase of a project exploring the animosity many Danes had toward transitioning from incandescent light bulbs to energy-saving bulbs (see Bille, 2019). While Danes wanted to save money on energy, the light from most of the energy-saving bulbs available in common stores were not seen as satisfactory by many. Main reasons in both public media and interviews were visual differences, which in technical terms marked a shift to higher color temperature (*Kelvin*) and lower color reproduction (*Ra*), leading to a sense of "cold" light and in effect to slow transition and even hoarding of incandescent light bulbs. As I entered people's homes however, it became apparent that domestic lighting is not solely about light bulbs. Light dimmers, lamp design, light through window, curtains, light from other electrical appliances, candlelight, and drawing in public lighting were also central to people's orchestration of their homes. The interviewed people knew that candlelight polluted but lighting them and their smell and warmth was quintessential to a sense of home and "coziness"—in Denmark called *hygge*. It was a dilemma: people wanted to save money and reduce the impact of energy use and particle pollution, but the sensuous change in color temperature and reproduction was too radical.

In the first pilot interview, I met Maria, a female entrepreneur in her mid-30s and mother of two living with her husband in an early twentieth-century house. I got invited into her home after attending a flea market to find participants. I commented on a lamp she was selling, leading to a talk about lighting, and eventually my research interest. She loved light, she said, but was also aware that it was often in the half-light that she lived. As she told me during the interview, when I asked about how she lights her home:

Maria: Even when I work from home, I don't have the proper light either. I have a Louis Poulsen lamp [renowned Danish lamp manufacturer] because I think it is pretty. But it is not the right light to work in. I am well aware of that. Then again, I put coziness (*hygge*) and atmosphere above practical lighting.
Mikkel: Sure, what is then not cozy?
Maria: It's too much light. Or no light at all, of course. I don't want it either. A fluorescent tube or a bulb that just hangs and shines straight down into the head, that's not cozy.

I had not in this first interview considered to tease out what she actually meant by this commonly used Danish term "coziness" (*hygge*), which is essential part of shaping pleasant sociality (but see Bille, 2015). It was a clear statement pointing to an important cultural category and social norm: "I put coziness and atmosphere above practical lighting." I then noticed that there were around 25 candlelight placed in her living room. she often lit them and had even thought about lighting them when I came around this noon summer day. It was evident that she does not only turn on light to *see* but to *feel*. Within few minutes, we had moved from the sensory focus on vision to feeling. Furthermore, one thing is what atmosphere she wants when alone, another thing is how the atmosphere *should* be when others are present. I asked:

Mikkel: If you invited some people for dinner, how would you like the lighting?
Maria: Then I would dim that one a lot [pointing toward a lamp]. I have found that only using candlelight is too dark. So that one, and those ones also provide some pretty cozy

lighting [pointing again]. So actually, I turn on many lamps but on a low level. And lots of candles. As you can see, I have candles in many rooms. Even in the toilet. And I think it looks extremely cozy when they are lit and it's totally foolish, because when people go to the toilet, they turn on the light and then you can't see them [the candlelight].

Mikkel: Then why do you think you do it?

Maria: That's because I think it looks cozy. I do not know. Because it's completely insane. But it's just, like, cozy, you know [laughs].

After 45 minutes of interview, I ended the recording, and Maria commented that while she was keenly aware that she used many candlelight, she had never thought so much about lighting as she had done during our interview. Lighting was taken for granted yet talking about it made her recognize an unconscious embodied homely practice. Vision was an element, but it was also about the way such lightscape made her body react, relax, and feel. She had now more explicitly noticed how the smell from candlelight and the warmth—in terms of both temperature and aesthetic glow—are also central to her lighting practices. As Pink notes: "The interview creates a place in which to reflect, define and communicate about experiences" (2009, p. 87). She could *talk* about her lighting preferences and atmospheric experiences, although often narrowly defined in relation to the concept of coziness (*hygge*), thus offering an entry point and concepts to understanding sensory lives. It started off in quotes about putting coziness above practical lighting that came out clear and quotable. Yet by the end of the interview, it became opaquer: "I do not know." Focusing the interview on the senses offered the opportunity to understanding ways of becoming attuned, and of attuning social worlds through light (see also Bille, 2019). She talked about lighting as a continuous practice of making the home *felt*, more than merely *seen*. It was about *hygge*. Clear, but not simple. And maybe the words that stood so clear in the beginning were not so clear by the end.

The example raises a range of points for interviewing on the senses. First, a mono-sensuous focus on vision may miss that lighting practices may be more about multi-sensuous and embodied *feeling* than *seeing*. Second, that the ability to articulate what is felt may at first seem clear and pointing to a cultural concept such as *hygge*, I presumed I understood what she meant by. Identifying terms in that sense "is also a pragmatic way of giving an account of a situation or event. Names are ascribed to atmospheres in ways that enable, or not, joint recognition" (Anderson & Ash, 2015, p. 36; see also Frykman & Frykman, 2016, pp. 15–17). But *hygge* may simultaneously be seen as a vague concept, covering a broad range of situations. It shows that both lighting and the atmosphere termed *hygge* are active forces, at once in the background of social life, but also at the forefront of practices staging such life. The background is then "not an inert, natural backdrop but a collectively lived and shaped condition" (Anderson & Ash, 2015, p. 34). Exploring terms used with great clarity, mistakenly unquestioned by the interviewer, may thus offer analytical lenses into cultural and sensuous phenomena and into the social life of light as both sensorial norm and social obligation. But just as clear, easily spoken words may contain aspects with vague descriptive power, so too, can vague words sometimes elicit more than simply ambiguity or lack of knowledge.

Talking about the vagueness of felt spaces

In 2012, a square in Copenhagen was inaugurated in honor of the late Danish politician Svend Auken. It was part of a traffic calming project and as the project leader from Copenhagen

Figure. 10.1 Svend Aukens Plads, in Copenhagen Denmark. Photo by the author.

municipality explained, "It will typically be a place you pass by. And, of course, you can also settle down and watch life pass by" (Byng, 2012). And indeed, years later, passing by is also what mostly happens with only few people congregating or taking a break here. In a news article covering its establishment, it was noted that the square

> may not look like much on a snowy morning in December. In fact, it looks more like a scene from a post-apocalyptic movie. The hilly urban space and its bare bush growths hidden under a sheet of snow. The cold benches and zebra-striped elevations are deserted.
>
> *(Byng, 2012)*

The square was designed with benches, colorful spotlight creating a scenery with contrasting dark and lit spots in green, red, and blue, planted hills, and a zebra painted hill. It is rather noisy as it is opening up toward the traffic, rather than bracketing it off. Four stories above the meticulously designed square, I interviewed Morgan in 2019: an academic in his late 40s living in a four-room apartment with his children. I had met him a few times before, and we had talked about the square that he had lived next to since its establishment. He somehow never really noticed it or could recall what it looked like, despite being right there next to his doorstep. His apartment was from the turn of the twentieth century and had a balcony toward the square where we could overlook the square to get a better understanding. It turned out, however, that we could not stay out there since a high wind made it uncomfortable. As he said, "It is disappointing in a way. That feeling of going outside on the balcony and then

there is just a lot of wind." Urban life is a sensuous experience and standing inside looking out creates a sensorially detached experience where sounds are muffled, and wind, smell, and temperature are at a distance reducing the urban life to largely a visual sensation.

So how would he describe the feeling he had of the square? Although we met on the square before entering his home, and had seen it from the window, it was somehow obscure to him as we sat in the kitchen a bit away talking about it. He did not really recall what it *looked* like, but more what it *felt* like. He almost insistingly rejected common ready-at-hand words like "cozy" or "safe." He reflected on this avoidance,

> *Morgan*: Yeah. So, it may well be that I try a little to avoid designations like "cozy" and "safe" and words like that. I don't really know why. But I certainly wouldn't say it was "cozy." Then I would rather say that it was nicer to sit in front of the pub down there [in the bottom of his building], on those slightly cheap tables.

What is it that makes this place feel this way, and which makes people avoid settling, even though it is so artistically designed to make people stay? Sitting inside in his apartment, I tried to tease more out of him, and asked him to put adjectives on the sensation.

Morgan: Cold, a bit scrawny.
Mikkel: "Scrawny" as in "empty"?
Morgan: Yes, like in . . . or no, because there is something on it, but more like . . . Yeah, a bit like something that is a bit shabby. Even though it is of course rather new, it feels like somehow worn out. Or that hill there, seems like. . . . Maybe barren, you could say.
Mikkel: Barren?
Morgan: It appears very barren.
Mikkel: And you said "cold." What do you mean by that? Is it because there are no colors?
Morgan: Yes. Maybe. And then maybe also because the light just . . . . When there is light on it, it has a slightly white character, I think. Doesn't it have that? That's how I remember it. And then I think maybe also the black and white stripes on the hill.
Mikkel: On the zebra?
Morgan: Yes. And it is like . . . As I remember it. Like . . . Or are there some colors too? I remember it as a bit grey. And what else would I call it? It also has such a fragile . . . It also seems a bit fragile. By the fact that it is located where it is [between roads]. And also that it's like—It hasn't really been placed right up against the houses either. Because there's that parking lot. So it's like: It has a complete island-feeling to it.
Mikkel: Now you say "fragile." Does that mean unsafe?
Morgan: It's more like . . . . What should I say . . . . Fragile as opposed to . . . . It's like . . . It's a bit like the Town Hall Square which is also such a place you don't stay at. So maybe "fragile" more like "uneasy." Or like . . . . Yes. All the time *out of balance*. I think I would say that.

After the interview, I was a bit frustrated of not coming to closure and get a "perfect quote." It took some time, where he needed to get his head around the impression it gave him. Pausing. Reflecting, rethinking, and rephrasing. However, listening again and reading the transcription, it dawned that he actually did get to a point where he felt settled in what the place feels like: "all the time out of balance"—even if in the interview situation I may have felt the matter unsettled by that statement. This was not about feeling "safe" or

"unsafe," as if those words somehow are more precisely describing the place than "fragile," but about finding the words that best described the place. He was, in the words of Robert Mugerauer, trying to find the "fitting words," and not just the taken-for-granted words, in order "to hold on to landscape through language and thereby see, understand, share and live" (Mugerauer, 1985, p. 58).

Morgan then turned from describing the impression it left on him to the actual features and situations where he had been on the square. He found it to be a difficult and "opaque" space to get his head around. He talked about how he had once walked up on the hills to explore, following the paths that he would have thought would lead somewhere.

Morgan: It may well be that there was some grass before, but the whole experience was a bit surreal. That those elements were like . . . . It's a bit like being in a museum where you see reconstructions. You know there was a hill with grass and bushes and this wooden terrace, but it was like . . . The sense of what the body would normally do around those things, was not present at all. Like going away [from the square onto the path]. So [the design] signaled things which could then not be done. So that's why it seems like . . . A bit uncanny in some way.

Mikkel: And the things that signal it, is that the path, the planting, and that zebra?

Morgan: And that flagpole. It's on the same hill, I think. So yes, that whole composition. It doesn't really make sense, I think.

Morgan struggles his way through making sense of the square that stands out in the neighborhood by its theatrical design and its lack of use. He passes it every day and can see it from his window; we had met on it and seen it from above; he is not afraid or feel unsafe there; but Morgan struggles to find the "fitting words" beyond common phrases like "safe," "eerie," or "cozy," which is not fitting to him. One way of interpreting this would be to say that he made a vague description of a concrete place. Another interpretation is that it was beyond words to describe what the place felt like. However, I want to turn the argument around and argue that he provided an atmospheric description, enabling him to hold on to it, through words, to understand it, rather than merely a physical description of the material objects and routes taken on the square. He was describing a vague entity—the atmosphere made up of things, weather, and moving bodies—in a precise way, by pointing out the sensory qualities of coldness, shabbiness, fragility, and out of balance (following Griffero, 2014, p. 7).

This, of course, leaves the predicament that the ontological status of atmospheres, as philosophers have explored it, is not certain but rather quasi-objective and often vague (Böhme, 1993; Griffero, 2014). So, what is "out of balance" is not as such the ontological status of the square as a material assemblage but rather the atmospheric sensory impression it fosters in the meeting between perceiving subject and the square exposed in weather conditions. Words matter in this sense, because they may help attend to the vagueness that make up in both the background and foreground of human lives. As Pina-Cabral summarizes, "vagueness, both in the sense of permeability of borders and of ultimate indeterminacy of causation, is a characteristic of life in general" (Pina-Cabral, 2020, p. 795). The interesting lesson here is that while I did not tease Maria more in figuring out what the concept of *hygge* is, it was clear what it *does*. Interviewing Morgan, I was more aware of the need to tease out more and realized that what felt like fumbling effort to sense and make sense were actually more fundamentally a way of finding "fitting words" describing the vagueness of the world.

Reflections on becoming a sensory scholar

I have wished to show how the interview is an epistemic process for both the interviewee and the interviewer. That is, a process whereby both come to understand how they make sense of the world and their senses, not the least by being present in the space. Often, however, it is only at the point of revisiting the interview by listening or reading it that the omissions and missed opportunities come forth, realizing not only that there were "good quotes" and low-hanging fruits—mostly through clear short quotes—but also how these quotes are part of a negotiation of skills, positions, and sociality of the interview. Sometimes giving something of yourself in the interview may open for more insights from the participant. But it may also leave the data superficial, as you position yourself as knowledgeable and thus avoid or forget to answer the naive questions, such as "what is cosiness/*hygge*?" or frustratedly teasing for more clarity. As Fujii notes:

> "[M]istakes" do not just teach researchers what not to do; they can also provide insights that may not have emerged had the "right" words or language been used from the beginning. By reflecting on what these "failed" interactions reveal, researchers can turn moments of regret into gifts of valuable insight.
>
> *(2018, p. 6)*

The two interviews were performed by me: the first one was in a project which also included an assistant interviewer, and the latter was in a larger project with ten other team members conducting 292 interviews. Working in teams obviously raises the question of the role of other data than the spoken in analyzing sensory interviews and it also makes reliance on words even more profound, risking that words overshadow other sensory aspects of the interview situation. On the other hand, as I have wished to show here, it also forces one to consider what it is that interviews offer. Rather than merely being cautious toward the representational character of interviews, I want to promote a pragmatic view and encourage to embrace what is said as clear statements that may both cloud the vagueness of the phenomenon and resist bypassing expressions of vagueness as something that needs to be overcome (see Sørensen, 2015). Interviews revolving around sensory experiences, by the very fact that such experiences may not be first in line to reflect upon for the participants, thereby emphasize the importance of attending to participants' processes of reflecting and describing the world and the way the interviewer sense, understands, and intervenes in that world. Language in this way is performative, allowing for the participants to fumble for fitting words that helps them understand and share a world that is neither totally unknowable nor totally clear, but embraced by a certain vagueness. Attending to people's ways of describing both distinct and vague sensory experiences offers the potential to open for new aesthetic categories and the role of senses in everyday life. This allows us, for instance, to focus on feelings rather than merely vision, when analyzing lighting practices. It also allows us to expand on the atmospheric descriptions to include what is seen as more fitting words to describe the felt vagueness beyond the most common phrases. The task then is to figure out if it is a semantic, metaphysical, or even some other type of vagueness that is at stake.

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11

PARTICIPATORY SENSORY ETHNOGRAPHY

A collaborative methodology for understanding everyday journeys of disabled people

Gordon Waitt and Theresa Harada

In this chapter, we consider participatory sensory ethnography for disabled people facing disadvantage while undertaking the kinds of "mundane" journeys most of us take for granted such as shopping, socializing, or attending medical appointments. To accomplish journeying by a power-assisted device, such as an electric wheelchair or mobility scooter, everyday trips require careful trip planning and the mustering of personal strength. We contend that participatory sensory ethnography complements critical disability studies by bringing to the fore fine-grained details that are meaningful and insightful to understanding the process of journeying. Our learnings draw on our position as non-disabled geographers researching for the first-time disability-related spaces and experiences. The project was titled *Integrated Futures for the Use of Motorised Mobility Devices* conducted in New South Wales, Australia, from 2019 to 2022. This project aimed to better understand the geographies, mobilities, and politics of power-assisted devices. The rationale for us as non-disability geographers conducting this work is our commitment to emancipatory projects and collaborative research design (Worth, 2008). Fieldwork was conducted in three sites: South-Western Sydney, Wollongong, and the Northern Rivers of New South Wales. Sixty-seven people with disability and three caretakers consented to participate.

To present our methodological learnings, the chapter is structured into four sections. The first section outlines the research design background and its grounding in disability studies. The next section discusses our research ethics. This is followed by a discussion of our participatory sensory ethnography under the following headings: recruitment, embodied methods, and participatory data analysis. To conclude, the chapter outlines methodological learnings.

Research design background

The back story for this chapter is the work of disability scholars over the last decades to mobilize research design for disabled people, position participants as co-researchers rather than research subjects, and engage with co-researchers in situ as they undertake journeys. Since the 1990s, fueled by calls for a critical disability studies, debates about research design have proliferated in the literature (see Barnes, 1992, 1996, 2003). Three bodies of literature

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are key to advancing the field and informing our research design: a social model of disability, feminist notions of embodiment, and non-representational theories.

Disability studies as a discipline grew from a critique of research drawing on a medical model of disability as impairment. How medical studies understood disability was through the biological body. Interest was in measuring the "true" incidence of disability among the population employing positivistic quantitative survey techniques (e.g., Martin et al., 1988). Calling for research paradigms that empower disabled people, Abberley (1992) argued that quantitative methods generated by non-disabled "experts" maintained distorted understandings of disability as a "personal tragedy." In sum, quantitative methods were critiqued for working within the political status quo by reproducing social hierarchies between people with, and without, disability.

A social model of disability was called for by those scholars advocating for an avowedly "emancipatory" research agenda. To address the oppression of ableism, the emancipatory research agenda turned to critical social research traditions, including Marxism (Barnes, 1992; Barnes & Oliver, 1995; Oliver, 1993). The social model of disability brought attention to how ableism is embedded into social structures, policy, and procedure that work to marginalize and disable people in public spaces (Murray, 2004; Oliver, 2004; Tregaskis, 2004). Thinking with a social model, disability is produced outside of the medical body.

Crucially for our research design, critical disability studies advanced a research agenda *with* disabled people, rather than on disabled people (Barnes & Mercer, 1997). The emancipatory research agenda informed by a social model of disability demanded undertaking studies of some practical benefit by the removal of "disability barriers." This resulted in greater focus on self-empowerment, the social relations of knowledge production, and a plurality of data collection methods in response to the needs of disabled people (Stone & Priestley, 1996). In sum, a social model of disability necessitated research designed by disabled people that allowed their experiences to inform the new emancipatory research agenda: planning, fieldwork, analysis, and writing (Oliver, 1993).

In feminist disability studies, early optimism for the social model of disability quickly ran into a barrage of criticism for the lack of sensitivity to difference coupled with a lack of reflexivity of the advocates. Implicit assumptions about what constituted disability were shown to be dangerously simplistic when attention turned to theories of embodiment (Kittay, 1999, 2011). Through maintaining a focus on embodied practices that happen in place, feminist disability scholars have paid closer attention to the narratives of becoming disabled that emerge through this situated engagement. For example, these studies include chronic illness (Moss & Dyck, 2002), mental ill-health (Parr, 2006), accessible housing (Imrie, 2004) and schools (Worth, 2013). Garland Thomson's (2011) work on "fitting" or "misfitting" as a framework makes clear the importance of understanding disability as a situated and embodied as bodies "rub up against" the socio-material world. The premise of the social model that disability may be attributed to decision-making processes or social structures fails to reflect how disablement is felt in specific contexts. For our project, this literature points toward important methodological implications that arise from narrative approaches to understand everyday practices and a feminist ethics of care, including reflexivity.

The third relevant body of literature concerns non-representational theories, including Deleuze and Guattari's notion of affect (see Hall & Wilton, 2017). Thrift (2004, 2008) discusses the notion of affect as "the sense of push in the world." Rather than being concerned with the biomedical body or social categories, attention turns to questions of how bodily capacities to sense and do things are diminished or enhanced within a shifting field of

potential precognitive affective forces (Bissell et al., 2017). In dialogue with mobility studies, geographers discuss how the intense embodiment of journeying is felt in the relationship between movement, bodies, things, and others (Bissell, 2010). The role of the senses is a central consideration, including the haptic, kinesthetic, thermal, and visual. Through repetitive experiences of everyday journeys, a person's sense of self in the world is conceived to be made, remade, and unmade (Bissell, 2014; Waitt et al., 2021). By bringing to fore the sense and sensibilities of repetitive and routine journeys, attention turns to what bodies can, or cannot do, in specific contexts. This conceptualization is important for understanding journeying by power-assisted mobility devices. The sense and sensations of wheeled journeys by powered mobility devices help people to evaluate routes, make sense of themselves, their disability, and the built environments they travel through. People who journey by powered mobility devices are therefore skilled practitioners, attuned through their bodies, to roads, pavements, topographies, and weather conditions (Waitt & Harada, 2022).

What concerns us here is how mobility scholars have mobilized performative approaches and sensuous methods to engage with co-researchers in situ as they undertake journeys. Sensuous scholarship conducted *through* mobility combines semi-structured interviews, participant observation, video recording, photo-diaries, and follow-up conversations (Birtchnell et al., 2017). Here scholarship requires the researcher using their own body to help map the sensations of routine everyday journeys through learning the mobility practice or reviewing video outtakes/photographs with co-researchers. Attention turns to not only moments of heightened emotional and affective intensities but those when nothing seems to happen. To take the researchers into power-assisted mobility device worlds, the project design combined mobility biographies with photography/video methods.

Ethics

Our research ethics is influenced by two related general positions: first, the mandates of the disability activities and rights movement of the 1990s to make space for the voices of disabled people (Barnes, 1996, 2003; Oliver, 1992) and, second, by a feminist ethics of care, specifically Young's (1997) notion of "asymmetrical reciprocity."

The first proposition is captured in the disability rights movement statement: "no research about us without us." The implications are threefold: (1) a positioning of people who participate in projects as co-researchers rather than research subjects; (2) a collective right not to be researched; finally, (3) a right to select and review all research materials before the circulation of knowledge. This meant our sensory ethnography included an ethical commitment to consider not only the research practice, but also the kinds of knowledge produced.

In practice, the first proposition necessitated working closely with our research partner (Assisted Technology Suppliers Australia) and being attentive to how uneven power relations reproduce ableism in mobilities research (Parent, 2016). Our collaborative research design involved employing a person with experience of wheelchair mobility as a research assistant. The role of research assistant advised us on our project design with verbal co-researchers. The research assistant was essential to establishing trust in forging relations with the target community and understanding the role ableism plays in asking questions to people who have a different mobility experience from the researchers.

Furthermore, the first proposition meant addressing how notably underrepresented within disability studies are the experiences of people with intellectual and multiple disabilities (PIMD), who are often living institutionalized lives. As Barton (2005, p. 325) argues,

particular attention in research design must be given to "those individuals who do not communicate through speech." We agree with Tuffrey-Wijne et al. (2008, p. 188) that excluding persons with PIMD from our research is unethical. In practice, this meant research ethics must consider potential disparities of cognitive ability alongside the uneven social and power relations between co-researchers and researchers.

The second proposition, a feminist ethics of care, stresses the situated researcher in research relationships configured by reciprocity, respect, and equality. This processual, rather than institutional approach to ethics, focuses on ongoing reflexivity throughout the research, rather than ending with human ethics research committee approval. The situated researcher must reflect on their ontological and epistemological assumptions, the institutional context, interpersonal relations, and the process of knowledge production and sharing (Mauthner & Doucet, 2003).

Young's (1997) notion of 'asymmetrical reciprocity' is a useful moral framework for guiding reflexivity. Asymmetrical reciprocity encourages an openness to learning from co-researchers about their worlds. According to Young (1997), the relationship between researcher and researched is always asymmetrical because of social positions and personal histories. The principle of asymmetrical reciprocity calls for an awareness of the research dilemmas of social privilege. For example, a researcher, who is in a more privileged position, may unwittingly misrepresent a co-researcher by putting themselves in the position of those who are less privileged. Young calls for moral humility. Applied to this project, we acknowledge the impossibility of knowing another person's experience and the preconceptions we brought with us. In conversation about the project with our research assistant, we began to question how taken-for-granted assumptions may reproduce the abled/disabled binary. In relation to non-verbal co-researchers, questioning taken-for-granted assumptions applied to both the content and method of communication. In practice, this required a commitment to reflect upon our taken-for-granted assumptions of how people with disability should participate alongside learning non-verbal co-researchers' ways of communicating and thinking (Calveley, 2012; Dreyfus, 2021; Gjermestad et al., 2022; Klotz, 2004).

A second insight from the application of Young's (1997) notion of "asymmetrical reciprocity" is that dependence on power-assisted mobility devices should not be understood as something that is undesirable or shameful. Such interpretations have a libertarian, individualist, and masculinist character. Furthermore, this fails to acknowledge that we are all dependent social beings. Everyone is dependent on the care of others for significant parts of their life. Throughout our project, we became aware of our own position and perceptions within liberal societies that foster the rational over the emotional, independence over dependence, and individual freedoms of the adult, unencumbered male over the collective.

A feminist "ethics of care" that situates the self in relational spatial understandings helped us appreciate that we are all vulnerable and dependent in different contexts. In practice, sharing of researcher accounts of mobility injustices with co-researchers facilitated rapport. For example, the researcher shared the judgments of traveling on public transport using crutches after an injury. Sharing such judgments generated moments of trust through acknowledging the embodied experience of moving differently. Sharing personal experiences served as an entry point to dwell upon the evaluations and justifications that lie behind such judgments.

Finally, the notion of "asymmetrical reciprocity" encouraged us to reflect on how co-produced knowledge is always situated, partial, and always constituted for research purposes (Spencer, 2001). It is important to embrace epistemic modesty, in that it was impossible to understand all non-verbal co-researchers' expressions. It may be physically or intellectually

challenging for co-researchers to communicate what matters to them and why. Or it may that some emotional experiences are beyond individual communication skills. Or it may be that they are reticent to share experiences that do not align with social norms that may be read as weakness, for example, or dependence. We were mindful that the practical need of power-assisted mobility may become a trigger of internalized oppression that makes co-researchers vulnerable from the outset. In recognition of these challenges, the research design created communication spaces which would enable co-researchers to convey, if they wanted to, what experiences do and do not matter to them and why. Where the research occurred was always selected by our co-researchers or their carers to help them relax and to position them as experts.

Research design: participatory mobile sensory ethnography

Informed by the back story, our research design positioned our co-researchers as highly skillful sensualists through their everyday journeys on power-assisted mobility devices. We understood journeys by power-assisted mobility devices as fundamentally geographical, crafted through the reciprocal relationship between bodies, skills, ideas, and things. In what follows, we discuss recruitment, embodied methods, participatory data analysis, and writing-up. Our selection of qualitative mixed methods was informed by the lively debates surrounding the greater neurodiversity and unique sensory schemas of individuals in disability studies (Alper, 2018; Morris, 2017).

Recruitment

Recruitment occurred through two strategies. First, potential co-researchers were solicited via mobility device retailers and care providers (including occupational therapists and caregivers). With the help of co-researchers, the project then recruited through snowballing. People with intellectual disabilities who are functionally non-verbal are often excluded through research design, or deferred to their proxies (caregivers, families, supporters). Non-verbal co-researchers may process sensory information in different ways, and this poses challenges to a sensory ethnography that prioritizes speaking (e.g., see Williams (1998) on the autistic population; Heatherington (2002) on visually impaired people). Thus, following the lead of Nind (2008) and Dreyfus (2021), for non-verbal co-researchers we began by creating a non-verbal communicative and thinking profile with the help of their care workers and family members. This non-verbal communication and thinking profile helped us interpret how non-verbal co-researchers felt about everyday journeys as well as their ongoing involvement. Co-researchers chose to be identified or deidentified using a pseudonym or nickname.

Embodied methods

Mobility studies have been integral to debates on sensory ethnographies through discussions of mobile methods as techniques to understand the situated knowledge of journeys that are grounded in sensations (Harada & Waitt, 2013; McIlvenny, 2013; Spinney, 2011). The project was designed in embodied terms by combining photography/video methods with a semi-structured interview with co-researchers and their proxies. Co-researchers chose which option they preferred. Combining semi-structured interviews with photography/

video methods allows the research to consider the meanings, skills, and sensations of power-assisted mobility device practice.

Initially, each co-researcher (and proxy with non-verbal co-researchers) met with a researcher to discuss the project and organize a convenient time for a conversation to reflect on their routine journeys. The semi-structured interview schedule was divided into six sections: "getting to know you," "getting to know your mobility device," "regular patterns of use," "positive and negative moments," and "the future." Conversations drew on our understandings that how a body moves may be conceived as a personal biography that links the past, present, and future. The interview allowed possibilities for open-ended prompts that encouraged reflection and contemplation of the sensate dimensions of how different mobility devices afford and mediate journeys over the life course. A common conversation concerned mobility aid technologies as changing understandings of self as independent and places as accessible, including walking sticks, frames, and manual wheelchairs alongside power-assisted mobility devices. Conversations focused on the transformative potential of mobility devices as co-researchers negotiated place. The need to journey with a power-assisted mobility device distinguished co-researchers as a unique body–object configuration with important embodied implications. For example, the psycho-emotional dimensions of the transcribed interviews offered insights to the implications of reciprocal relations between place, and co-researchers, that were felt through bodies. What registered were the contingencies of unfolding moments of being marginalized or recognized as equals while journeying in, and through public space.

Next, co-researchers were invited to video record or photograph routine journeys as the basis of a follow-up conversation. In response to discussion of the ethics of recording in public spaces (see Green & Zurawski, 2015; Walker, 2010), co-researchers were provided with guidance on the etiquette of street photography following Arts Law guidelines (Arts+ Law Centre, 2016). Specific attention was given to eliminating from digital recordings focus on the actions of individuals in any identifiable form.

Video and photographic technologies have long been part of the mobile method toolkit (Harada & Waitt, 2013). Video methods offer insights to how people experience their bodies kinesthetically as they move through the places that comprise familiar journeys (Waitt et al., 2021). In our case, as co-researchers' bodies undertook mundane trips, they photographed/video recorded their appraisal/negotiation of the journey environment, its unfolding and ongoing rhythms, spacings, and movement. We acknowledge that wheeling or riding everyday routes with cameras and video recording equipment yields mediated empirical data designed specifically for research (Merriman, 2014). That said, for some co-researchers, this technology was already an integral part of their routine practice to exhibit "day trips" for sustaining social bonds on social media platforms (Figure 11.1).

Participatory data analysis

Data analysis is when knowledge is organized and produced. Conventionally, as a distinct research stage, data analysis starts when empirical data collections finish, and the researcher assumes greater control over the research processes. Following Pink (2009), our project aimed to move the interpretation from the cognitive toward a more performative methodology, discussing what our collaborators do and how they experience the journey. Our analysis therefore occurred in conversation with co-researchers. There are some emerging accounts

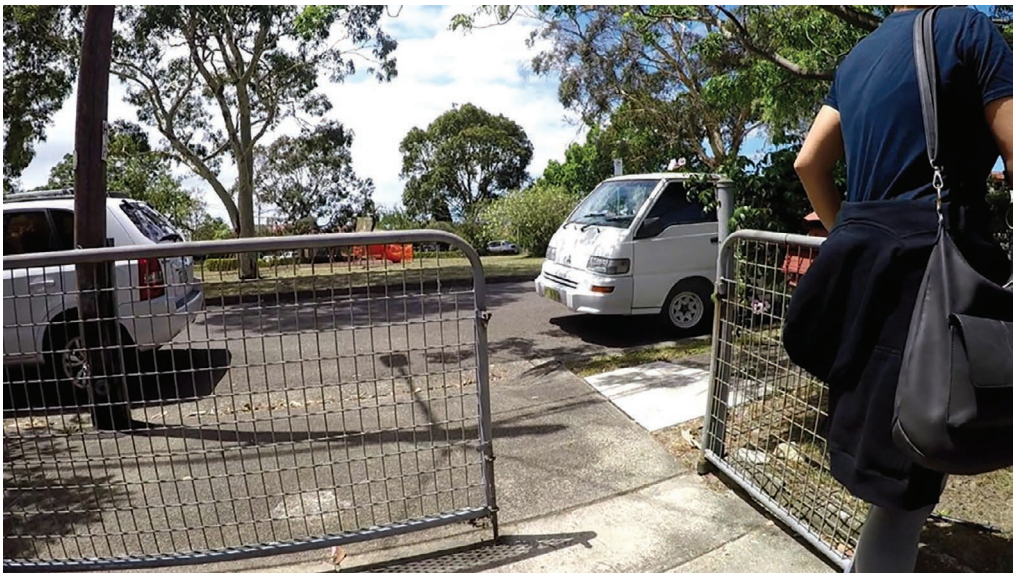

Figure 11.1 Wheelchair-mounted Go-pro. Video recording an everyday journey with carer. Reflected in recordings were bumps, rough surfaces, or steep angles; negotiating other pedestrians and traffic; lack of footpaths; or the height of counters in retail shops. These were starting points for conversations around the importance of mobility in everyday life for sustaining a sense of self and place.

of participatory data analysis with people with learning disabilities. For example, Williams et al. (2009) described their use of conversation analysis to analyze the video stage of their Skills for Support study.

In our project, the analysis was conducted through a process of abductive reasoning, grounded in Deleuze and Guattari's (1987) rhizoanalysis. Rhizoanalysis pays attention to how emotion and affective forces, triggered by the ongoing coming together of the reciprocal socio-material relationships that comprise our worlds, offer possibilities to reproduce, rupture, or reconfigure everyday journeys. To illustrate the mobility (in)justices of power-assisted mobility device practices that occurred in public spaces, our concern was with moments when the body experienced itself kinesthetically, that is, moments of passive or heightened affective intensities.

In practice, we drew on the notion of kinetic empathy to uncover insights on how co-researchers' bodies experienced power-assisted mobility devices as intrinsically rewarding, or not, in the shared public spaces of everyday life. Here, analysis is an emotive practice that requires the researcher sharing their own emotions derived watching a video or viewing a photograph with co-researchers (and proxies). As discussed by Pink (2009), sensory ethnography is a collaborative enterprise. The aim of the sensory-dialogue approach was to surface insights of the embodied, intuitive knowing of the power-assisted mobile body. In this project, the researcher selected both passive and heightened moments that captured emerging insights to the affective politics of journeys (Harada, 2019). These included the sensations from the interruptions to a journey that changed the tempo or speed; being still for long periods or moving faster; as well as happenstance encounters with other people, vehicles, the elements, plants, and animals.

Sharing of experiences is deeply personal. Participating in data analysis may reactivate past trauma, heightened further if academic colleagues do not listen sensitively to their co-researchers' responses. In this way, interpretation becomes a sensitive process of mutual exchange and care toward the data and to each other. Such sensitivity may be strengthened by a level of trust and psychological safety between the researcher and co-researchers and is important for collaborative sense-making to happen (Frankena et al., 2019).

For non-verbal co-researchers, proxy videos/photographs recorded by carers or family members of everyday journeys only occurred after researchers were equipped with a better understanding of co-researchers' non-verbal ways of communication through looks, touches, utterings, and gestures. The non-verbal communication profiles offered insights to how co-researchers use non-verbal clues to communicate emotions and preferences, including communication aids (chat books), bodily gestures, phrases, behaviors, or signs. What we learnt through sensing about the individual communication preferences was important to all interactions, from arriving in a context, to reviewing the proxy videos outtakes, and listening to the insights they offered into their journey preferences and dislikes. Despite the experience we gained from the sensory-dialogue approach with co-researchers with profound and multiple learning disabilities and their proxies, our interpretations remained partial and situational. Repeatedly, we were confronted by how to interpret our collaborators' actions (see Boxall & Ralph, 2010). Keeping us aware of the complexity of building ethical and rigorous research practice were situations that involved unfamiliar bodily gestures and movements (head jerking, shrugging), utterances (groans, shouts), incongruous facial expressions (eye darting, mouth contractions), and bodily processes (drooling, dribbling).

Writing-up

How to write-up sensuous research to augment understanding of power-assisted mobility politics through immersive everyday journeys? Writing-up itself was a collaborative process with co-researchers. We experimented with two techniques to write collaboratively with our co-researchers. First, we created opportunities for feedback on the writing-process by presenting to our co-researchers four common themes that cut across the mobility life narratives: (1) the desire for social relationships and making connections, (2) normative assumptions of standing design, (3) interdependencies of various care and transport networks, (4) the built form when going places. The first theme spoke to the importance of mobility in maintaining personal independence and freedom over when and where they went, without having to constantly rely on others. The second theme highlighted how the default design of buildings (entrances, doorways, passageways), infrastructure (roads, footpaths, lifts, trains), and public space (parks, beaches, pools) promotes the free flow of standing and walking bodies rather than sitting and wheeling bodies. The third theme underscored those ongoing meetings with social or physical barriers sometimes resulted in co-researchers becoming advocates for change. The final theme spoke to how each journey became a complex planning and scheduling operation because of the transport infrastructure default of standing design. Co-researcher feedback was used to confirm and clarify each theme.

Second, we took a "portrait" approach to writing-up. Two benefits arose. First, portraits facilitated collaboration through a process that involved co-researcher approval and clarification. Second, a portrait approach acknowledges that communicating our sensory

ethnography analysis is more than a process of representation. A portrait approach allows the researcher to convey the everyday realities for people with disability, rather than drawing on notions of a "representative sample" and fragmenting mobility experiences into excerpted quotations. The aim is to encourage in the reader an empathetic, in-depth engagement with a co-researcher's sensory world and through a form of acquaintance to invoke reflection on their everyday journeys. Portraits, by providing an autobiographical insider account of practices, offer the reader a way to feel their way into co-researcher's everyday lives.

Methodological learnings

Documenting and interpreting mobility experiences of disabled people is central to the research agenda of critical disability studies. Participatory sensory ethnography is helpful in this regard when everyday mobility is conceived as a journeying process that is embodied and multisensorial. The focus on the senses and sensibilities of the material and social relations that comprise journey environments as a practice helps understand the relations between disability, geographies, mobility, and politics. The process of journeying involves the hierarchical distribution of space predicated on embodied social norms and affects that privilege the movement of certain transport modes in the organization of space and exclude others. When mobility is conceived as a journeying process that privileges certain transport modes and movements, sensory ethnography offers insights to the politics of ableism by how disability is felt on-the-move somewhere.

Several methodological learnings that will assist other researchers working at the intersection between geographies, mobility, disability, and politics arose from the project *Integrated Futures for the Use of Motorised Mobility Devices*. Here we highlight five. First, working at the intersection of geographies, mobility, disability, and politics brought to the fore critical awareness of normative assumptions around sensory perception and processing. The ethics of sensory privilege of neurotypical research extends beyond the ethics application and embraces the notion of elevation for non-verbal co-researchers alongside informed written proxy consent from their carer/family member (Calveley, 2012). Furthermore, it was important to reflect on our own neurotypical abilities to process sensory information of journeys, how medical language privileged normative conceptions of sensory processing, and to comprehend the sensory language of the non-verbal with reference to a co-researcher's individual communication profile.

Second, not all co-researchers embraced digital technologies. Indeed, digital technologies became a source of anxiety for some. Video and camera mounts failed to attach to some power-assisted mobility devices (Figure 11.2). Likewise, uploading files to the project-dedicated data portal became a source of frustration because of slow internet speeds or limited opportunities for computer skills training. These practical perspectives increased our awareness of the broader range of social inequities for people with disability, beyond mobility.

Third, for this project, relationship-building and trust was essential before, during, and after the fieldwork. Relationships with co-researchers were built and strengthened over time through informal meetings and check-ins by phone, text, email, and project updates. Given the context of COVID-19 and major flooding events which occurred during the project period, we recognized that co-researchers were likely subject to high levels of anxiety and particularly vulnerable to social isolation. With the help of our wheelchair liaison, we maintained regular contact with co-researchers and assured them of the value and importance of

Figure 11.2 Despite producing an instructional "how to mount a camera holder" video for co-researchers, carers and family members were often called upon to capture journeys by wheelchair on video as some recording equipment was not compatible with devices.

their contribution despite the major disruptions to everyday mobilities. While mindful of the potential for overburdening co-researchers at a time of stress, we adopted a flexible schedule for data collection and emphasized the importance of their well-being. Consequently, most co-researchers became stubbornly committed to contributing, and described the research as a useful distraction from everyday worries.

Fourth, a key lesson from our participatory analysis was that our co-researchers often found it easier speak about the heightened affective intensity of eventful movements over longer periods of quiescence. Eventual movements were often circumstances which resulted in a co-researchers' heightened sense of themselves and their world. In contrast, viewing passive moments, in which nothing seemed to happen, our co-researchers found it far more challenging to speak about the role of power-assisted mobility devices in generating and managing emotions. To open conversations around how power-assisted mobility devices engage people with disability around them in emotionally generative ways, it became essential to share stories of walking and driving as a therapeutic practice.

Figure 11.3 The exhibition space (top) at the Ignite Accessible Community Gallery, Ballina, Northern Rivers, New South Wales, Australia, and Andy's "get off the couch" photograph (bottom). The exhibition provided an opportunity for people who use motorized mobility devices to communicate their everyday mobility experiences to others. Photographs, paintings, videos, and embroideries illustrated their personal stories in a creative and sometimes humorous way.

Finally, we learnt about different means of reporting the findings of a participatory sensory ethnography. As intended, the results were presented as a series of policy recommendations in publications. Moreover, the results were integral to dialogue groups to evaluate the delivery of services, equipment, and infrastructure with occupational therapists, planners, and industry representatives. In contrast, an unexpected means of communication of the findings occurred through the training of co-researchers as sensory ethnographers. This training empowered them to be commentators on everyday challenges of negotiating disabling environments. The participatory sensory ethnography seeded requests for an art exhibition to evoke the sensate world of the power-assistive device user and foreshadow possible future social actions (see Figure 11.3). The exhibition offered possibilities for the unsayable to become said using photographs, videos, paintings, and embroidery to communicate the experiences of mobility scooter and wheelchair-using everyday journeys and for collaboration in research findings presentations. The exhibition works against the disembodied, detached reader and instead speaks directly to and with the audiences. As discussed by McCarthy (1998), creative arts media are central to opening dialogues and challenging social norms with people understood as having "othered" ways of knowing (such as people with dementia, young people, Indigenous people, people with an intellectual disability) (see Lieblich, 2006; McIntyre, 2003; Titchen & Horsfall, 2007)]. Our work points to the

potential transformative effects of participation in sensory ethnography. In our case, the participatory sensory ethnography in the Northern Rivers Region operated as an "intervention" that encouraged co-researchers to practice active and critical citizenship for the benefit of disabled people.

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12

SENSORY EXPLORATIONS OF DIGITAL TOUCH

Tactile apprenticeship with new industrial robots

Ned Barker and Carey Jewitt

Touch matters. Touch is perhaps our first and most immediate sense (Fulkerson, 2014; Paterson, 2007). Our experiences of touching and being touched help us to make sense of ourselves, of others and the world. Touch is often central to how we communicate. Indeed, knowing how to infer meaning from touch is considered the very basis of social being (Dunbar, 1996). It is significant for developing and maintaining personal relationships, from ritualized greetings, to communicating emotion or intimacy (Mclinden et al., 2019), and is an effective means of influencing attitudes, creating bonds between people, places, or objects (Krishna, 2009).

New waves of digital technologies are stretching the possibilities for how we "feel" the world around us and what, whom, and when we touch, creating an emerging landscape of "digital touch." Countless emerging technologies are taking many forms and entering diverse contexts (e.g., across a range of social and industrial settings). The Hey Bracelet is one example of this expanding landscape of digital touch where wearers can send haptic messages to each other (in the form of a gentle squeeze) affording new forms of intimate and remote communication. In industry, advances in tactile robotics make more collaborative interactions between robots and laborers possible. This holds potential to change the nature of work and the role of touch in those settings. In this chapter, we discuss how we employed sensory ethnography to explore this emerging landscape.

To contextualize the methodological challenges and potentials of bringing sensory ethnography to explore digital touch, we start with an outline of the scope and intellectual bearings of the wider InTouch project. InTouch applied the theoretical–methodological lenses of multimodality and sensory ethnography (Jewitt & Leder Mackley, 2019) to explore both the social semiotic and experiential dimensions of digital touch. InTouch is a five-year project that investigated the new and emerging landscape of digital touch technologies. We use the term digital touch (rather than haptics) to emphasize the project's social and sensory orientation to studying touch technologies in contrast to the dominant physiological, psychological, and engineering approaches (Jewitt et al., 2020). InTouch broke new methodological ground by bringing together theories and methods from multimodality, sensory studies, and artistic and design approaches (e.g., Jewitt et al., 2020; Leder Mackley et al., 2020). Through a series of 12 case studies, the project mapped the complex and diversifying terrain

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of digital touch, including *Virtual Touch* (Jewitt, Chubinidze et al., 2021; Price et al., 2021); *Remote Personal Contact* (Jewitt, Leder Mackley et al., 2021); *Newspaper Discourse of Touch in the Age of Covid* (Leder Mackley & Jewitt, 2022); biosensing technologies in parent–infant interaction (Jewitt, Leder Mackley et al., 2021); *Robotic Touch* (i.e., Barker & Jewitt, 2021, 2022a, 2022b); and *Interactive Skin and Social Touch* (Jewitt et al., 2022).

The Robotic Touch ethnographic case study (introduced later) is the focus of this chapter. We begin by introducing the notion of sensory apprenticeship in ethnographic practice and review its application across a range of subject areas. We then introduce a refined model of becoming a *tactile apprentice* that guided ethnographic research on the effects of industrial robots on the (touch) experiences of laborers. The ways in which we responded to methodological challenges in the field are then discussed. In doing so, we introduce three touch filters: *tactile landscapes*, *touch trajectories*, and *touch drivers*. These filters are analytical and methodological concepts that were developed in response to these challenges encountered, guiding fieldwork, and informing analysis. We draw on a range of ethnographic encounters to illustrate how we applied these filters to navigate the highlighted challenges. In this chapter, we make the case that sensory ethnography can be usefully refined to bring attention to the role of touch and that this holds great potential for researching emergent digital touch technology.

Sensory ethnography and touch

Sensory ethnographers attend to the situated experiences of those they meet, which may include tactile elements. In recent years, touch has been theorized in sensory studies as an important but neglected sense (e.g., Classen, 2005; Paterson, 2007) and yet it remains rare for sensory ethnographers to focus directly on touch. There are exceptions, such as Blake (2011) who conducted fieldwork in children's oncology ward and reflected on the process of touching and being touched as important tools for understanding the lifeworlds of those she studied. We consider touch, although ever present, to occupy the margins of sensory ethnographic practice.

Exploring the sensory experiences of laborers has been a focus for industrial ethnographers who have provided powerful insights into the nature of "dirty work" (Mccabe & Hamilton, 2015; Morales & Lambert, 2013) and "dangerous work" (Desmond, 2006; Johnston & McIvor, 2004). These ethnographic accounts have shown that touch clearly matters in shaping workers' daily experiences and identities. These studies, however, do not sustain a direct engagement with touch practices or experiences, instead placing their emphasis on observing labor practices from a distance. Methodologically speaking, there has been a reluctance for industrial ethnographers to get their hands dirty, to participate in industrial processes that may involve touching dirty and dangerous materials. In our view, these industrial ethnographies may be described as (sensory) ethnographies conducted at an arm's length. We therefore argue that "touch" also occupies the fringes of sensory explorations of industrial labor practices.

Recognizing that touch has been a relatively neglected focus in sensory ethnography, the InTouch project have been refining ethnographic practices to engage directly with touch. We have developed and tested a range of ethnographic methods to explore the mediating effects of digital touch in three case studies: *biosensing technologies in parent–infant interaction*; *robotic touch*; and *interactive skin and social touch*. This chapter is devoted to reflecting on the robotic touch research and specifically in illustrating how we drew on the

notion of becoming a sensory apprentice refining this approach to touch, as set out in the next section.

Sensory apprenticeship

In describing the move from observer to participant in sensory ethnography, Pink (2015) introduced the notion of becoming a "sensory apprentice" drawing on both Ingold and Stoller to develop its theoretical and practical orientations. Becoming a sensory apprentice involves the ethnographer striving to "learn how to sense one's environment in a culturally meaningful way" (Pink, 2015, p. 105) and connects with the strong traditions of "ethnographies of apprenticeship" (e.g., Lave & Gomes, 2019) and of "ethnographers as apprentice" (e.g., Downey, 2005; Weidman, 2012). Apprenticeship is a particularly useful model for sensory ethnographers to adopt because apprenticeship learning operates primarily through non-verbal channels, such as touch. The notion of becoming an apprentice has become widely used within sensory studies precisely because it can help challenge the visualist and linguistic orientation dominant within traditional participant-observation (Leder Mackley & Pink, 2014).

Examples of cases in which ethnographers have become apprentices include Marchand (2009) building with mud in Djenné, Downey (2005) learning Capoeira, and Weidman's (2012) musical apprenticeship in South India. These examples show how the apprentice ethnographer engages with embodied practices and the sensory environments when learning their new craft and taking note of the networks, relations, routines, and meanings that encompass it. Indeed, through a model of sensory apprenticeship, we can see and read how taste, proprioception, balance, hearing, and so on are all at play as the sensory mixes with culture through practice and place.

Working with the hands, touching materials and tools, is considered important for many aspects of apprenticeship learning. It is well recognized that "hands-on" experiences are vital in the development of core skills in industrial settings, and becoming a master craftsman (Lave & Gomes, 2019). The centrality of hands and touch in apprenticeship is not restricted to its educational or industrial manifestations; indeed, we also encounter hands-on metaphors to describe the participatory approach in sensory ethnography. Pink (2015), for example, described the sensory apprentice as someone "who learns about another culture by engaging and learning *first-hand* the practices and routines of local people" (emphasis added, p. 103). Furthermore, the notion of working with the hands as a way of doing ethnography features in writing about craft ethnography (e.g., Vannini & Vannini, 2020) and in ethnographies of craft (e.g., Atkinson, 2013) that share orientations with sensory apprenticeship.

Set against this short review of apprenticeship sensory ethnographic practice, we introduce the notion of *tactile apprenticeship*. We refined the notion of sensory apprenticeship to touch constructing a model that guided fieldwork and informed analysis. As a tactile apprentice, the field researcher (Ned Barker) shadowed and worked alongside laborers, where possible, to directly participate in touching and being touched. Through this approach, we sought to maximize opportunities to work with the hands aiming to home in on the role of touch without neglecting the wider social and sensory environment. Concentrating on learning about the role of touch within the industrial cultures, Ned also initiated serendipitous conversations with laborers to gain insight into how touch functioned and was experienced within the field sites. Themes that emerged from hands-on experiences, observations, and conversations were followed further through semi-structured sensory interviews that were recorded. In these

interviews, participants were invited to demonstrate and articulate their tactile experiences often with the use of objects; the use of material objects as part of sensory interviews has a long tradition in sensory ethnography (Harris & Guillemin, 2012; Pink, 2015) in multimodal (Dicks et al., 2006) and qualitative research more generally (Thorpe et al., 2022).

In the sections that follow, we illustrate how we operationalized the model of becoming a tactile apprentice in an ethnography of touch in industrial settings where new forms of robots have recently entered. In doing so, we outline some of the methodological challenges encountered in the field and reflect on how we developed analytical/methodological concepts in response.

Becoming a tactile apprentice to explore robotic touch in industry

A new wave of industrial robots hold potential to remediate touch practices and experiences in traditionally manual workplaces. Such robots are projected to accelerate automation, underpinning the transition from low-tech/high-touch forms of production toward high-tech/low-touch industries (Grodach & Martin, 2020). These shifts in industrial processes are often legitimized for their potential to free workers from dirty and dangerous touch (Royakkers & van Est, 2015). Against this sociological and industrial backdrop, the ethnographic case study that we reflect on here explored if/how emerging robotic technologies influence the social and sensory qualities of touch in the context of industrial work. The ethnography sought to build on research that investigates the sociopolitical consequences of technological development in modern industries by turning attention to the body and its relationship to labor (Shilling, 2011; Wolkowitz, 2006). However, our approach refined a broad focus on the body and the sensory environment to target touch. Consequently, the notion of becoming a tactile apprentice was deployed as a method of exploring tactility of labor in "dirty" and "dangerous" industrial settings where new technologies are entering.

Fieldwork took place in two industrial sites in the UK where new types of robots were entering and changing the nature of work. These were (1) a glass factory where new "collaborative robots" had recently been installed and (2) waste management center where an "artificially intelligent" sorting robot was put to work on the picking line. Ned spent a week in each site shadowing shift patterns of manual laborers guided by the aspiration of becoming a tactile apprentice (as introduced in the previous section). Guided by this model, Ned sought to participate in touch practices and interactions wherever possible (such as attending training, picking on the waste line, and inspecting bottles for defects). During his apprenticeship, he also observed how touch functioned in those settings (as a mode of communication and a means of production). Ned also asked workers about how they experienced touch in their working lives. The aim of combining these ethnographic methods was to learn how touch operated in culturally meaningful ways within those environments.

A broad range of targeted and serendipitous participatory activities provided a basis from which thick descriptions on the tactility of labor within these industrial settings were generated. In crafting fieldnotes based on his ethnographic engagements as a tactile apprentice, Ned weaved together social encounters with sensory experiences to foreground touch. To illustrate this, we share a fieldnote below that was taken after a shift at the waste management center where Ned sorted through materials with workers in the "cabin":

> There was an experiential baseline to the tactility of picking and sorting the waste in the pre-pick cabin—a palate of familiar smells and touches. Yet, there were moments

> when touching the discarded materials felt riskier and/or more unpleasant. The smell and sight of organic materials sometimes arrived in putrid concentrations, one informant used "shitty nappies or dead pigeons" as examples of particularly unpleasant encounters. Directly touching particularly unpleasant materials was sometimes avoided as pickers would remove items with the assistance of other materials to hand using them as makeshift tools. These subtle innovations in picking practices using techniques and "tools" aim to physically distance decay from the hands and nose. While actively avoided, bodily boundaries could sometimes be unexpectantly exposed. Today I grabbed a concealed item, instantly feeling an unidentified cold liquid seep through the protective glove. This experience punctuated my awareness. I recoiled. I paused to inspect the extent to which I was exposed to dirt. During the same shift, many syringes (unused and needle-less) passed by—my picking movements became more cautious as I scanned for potentially hazardous waste. My embodied response as a tactile apprentice was that picking momentarily felt more dangerous, or risky, as my bodily boundaries were made vulnerable through imagining touching dangers hidden in the disordered materials.

The purpose of sharing this fieldnote here is to illustrate the type of data that can be generated from the hands on participatory approach set in motion by aspirations of becoming a tactile apprentice. The embodied, tactile, and sensory thickness of the fieldnotes generated would not be achievable through observational approaches alone. Fieldnotes that were developed during the process of becoming a tactile apprentice covered a wider range of ethnographic encounters and themes that we have reported on elsewhere (Barker & Jewitt, 2021, 2022b, 2022a). The methodological point we make here is that guiding model was useful for foregrounding touch while learning about and revealing the daily experiences of those working in these industrial settings. Furthermore, these fieldnotes produced insights against which the remediating effects of new robotic technologies could be identified and explored further during the ethnography.

In pursuing the model of tactile apprenticeship, however, we encountered three key methodological challenges that we now identify. After this, we introduce a set of analytical and methodological concepts that were developed in response to the challenges encountered in the field; we call these *touch filters* (introduced later).

Methodological challenges of becoming a tactile apprentice

The first and main methodological challenge encountered across both sites was *losing touch of touch and its mediations* (Challenge 1). First contact with industrial settings raised the issue of being able to directly engage with touch in environments where touching is, with good reason, tightly regulated. As part of negotiating access, we made it clear that Ned would like to labor alongside workers and robots as far as possible as to facilitate the process of learning through touch. By making research intentions clear from the outset, and by employing the familiar idea of apprenticeship within the industrial contexts, gatekeepers facilitated a participatory approach as much as possible. This stated, the extent to which the hands-on participatory approach could be realized was complicated at times due to specificities of dirty and dangerous touch in each site. For example, after a health and safety induction at the glass factory, Ned was given explicit instructions to not touch any of the machines or heated glass. Being able to perform these potentially dangerous touch tasks that trained staff undertake

was not possible as an outside researcher, especially in the time available. Apprentice workers in the glass factory train in virtual reality and mock environments for 12 weeks before attending to the machines under strict supervision. Therefore, in the glass factory, the apprenticeship took the form of two experienced operators taking the role of facilitating as many (safe) hands-on experiences as possible and to demonstrate physical interactions with machinery as requested. In the waste management center, the tactile apprenticeship was realized, in part, by Ned picking alongside workers and robots across all sections of the line.

An important dynamic associated with losing touch of touch (Challenge 1) was being able to track the *technological mediation* of touch in contexts where direct contact between human and robot were also limited. While on one level it was clear to see where aspects of workers' daily touch practices had been outsourced to robots, in both sites the social and sensory implications of these were dispersed and hard to reach. Therefore, in response to Challenge 1 (of losing touch of touch and its mediations), we developed three analytical concepts and methodological "filters" to structure data collection and analysis to trace the mediating effects of the newly introduced technologies across defined levels (see Barker & Jewitt, 2021). As we refined and applied these filters in both industrial sites, we developed them further to assist in navigating two additional and related methodological challenges (Challenges 2 and 3) that were encountered. These were *striking an appropriate balance between touch and other factors* within the vibrant sociosensorial contexts (Challenge 2) and being able to *escape the economic framing of touch* (Challenge 3).

Applying touch filters to navigate challenges

We conceived of touch filters as methodological and analytical concepts to help us navigate the specific challenges encountered and introduced earlier. Specifically, we developed three concepts—tactile landscapes, touch trajectories, and touch drivers (introduced and illustrated later)—to help produce and organize data in ways that enabled us to trace and grasp dispersed technological mediations of touch across the industrial settings. As such, these concepts became valuable in shaping how the model of becoming a tactile apprentice was realized during the sensory ethnography.

It is not uncommon for ethnographers to apply (conceptual) *lenses* to keep certain themes *in focus* or to *shed light on, highlight*, or *magnify* observed phenomena. In this way, conceptual lenses can be understood as apparatus that serve ethnographers, who are operating in complex arenas, by enabling them to orientate themselves in the field without *losing sight* of framing questions. In contrast, we intentionally called our analytical tools "filters" to avoid such visual metaphors and to bring the tactile and sensory to the fore. We can elaborate on many notions of filters to indicate how this metaphor functioned in our work in applying the three concepts. For example, a filter lane directs traffic in an orderly fashion. Likewise, these touch filters helped to direct the ethnographer toward certain locations, questions, and phenomena. An equally useful idea of a filter is as a device through which materials (e.g., gas, liquid, or sound) pass through and unwanted sediments are removed. These touch filters also informed analysis because we passed sensory data through them to remove less relevant material, where each filter was uniquely configured to attend to particular dynamics of touch. Together then, these filters enabled us to better handle complexity, both methodologically (such as by directing attention in the field) and analytically (informing how we handled, organizing and reported on data). Therefore, these filters held ethnographic value for tracing the dispersed mediating effects of the introduction of new

technologies on touch (Challenge 1). We now illustrate each filter in turn by briefly introducing them and then discussing how they were valuable in overcoming the methodological challenges encountered (Challenges 1–3).

Tactile Landscapes refer to the varieties of touches that might be encountered while operating across a particular setting over time. It recognizes that people and materials move, and patterns of touch are established that stretch across time and space.

As a tactile apprentice, Ned participated in and observed a myriad of touches over the course of days of fieldwork. Some of these felt mundane and inconsequential, whereas others were intense and meaningful. To get his bearings and to discover areas of social and sensory interest, he had to be highly mobile initially following the full production process while touching and being touched where appropriate/possible. By moving through the environment, Ned came into contact with the various roles of touch across the full range of industrial processes. Practically speaking, this mobile approach mostly took the form of guided tours and wandering around the industrial field sites taking videos and writing fieldnotes. From this, it became possible to sketch out landscapes composed of the various touches that take place over the course of a typical day and stretch across the industrial settings. Through this initial exercise of mapping, we became sensitized to how touch experiences altered greatly in relation to where they were occurring, who was performing the touch task (i.e., type of worker or robot and their combination), what was being touched, and how. These tactile maps (that included textual-visual-sensed accounts) started to reveal some areas of interest in relation to the aims of the study.

After sketching these landscapes, specific locations from which to detail touch experiences were selected. Focus turned to areas where touch appeared to play a more important role in shaping the social and/or sensory nature of the work and where the implications of robotic touch for workers was at its most palpable. With a framing interest in dirty and dangerous touch, we decided to concentrate in the "hot end" of the glass factory and the "cabin" of the waste management center. This enabled us to refocus data collection from these more fixed positions to explore the mediating effects of novel technologies on touch in relation to the sensory experiences of workers stationed in these selected locations. As a tactile apprentice, Ned then spent large portions of time participating in these locales directly participating in touch and explicitly attending to these themes yielding fine-grained data. This filter was therefore valuable in relation to navigating Challenge 1 (losing touch of touch and its mediations) for two main reasons: (1) in some scenarios (e.g., when something goes wrong somewhere on the line), laborers may be moved from their usual area or refer to physical contacts that are happening out of sight. Being aware of these wider landscapes meant that we had experiential reference points to engage with and probe the full range of touch experiences that workers may be exposed to or talk about. This meant that the wider picture of touch experiences was not lost from the ethnographic account when data collection homed in on selected locations of interest; and relatedly (2) through mapping the tactile landscape, we became more aware of how discrete sections of the production processes were (physically) connected to each other even when not immediately visible. From this new awareness, we could start to explore the *dispersed* rather than direct mediation of touch.

Touch Trajectories recognized that touch (as a social and sensory resource) is not static but rather shaped and reshaped through participants' ongoing engagement with their settings. This filter therefore seeks to capture the dynamics of touch by exploring the common paths along which people learn to perform, communicate with, and experience touch.

It became clear that workers like Ned (albeit on a much shorter timescale) are caught up in a *process* of learning how to touch. Furthermore, the process of becoming a tactile apprentice (for the workers and ethnographer) is not *exclusively* framed by acts and experiences of touching. In other words, learning to touch does not solely rest upon repeating and performing manual tasks (although this is important). Instead, this process was entangled with a wider range of social meanings and sensory environments. By developing and applying this filter, we came to realize that the symbolic meanings and sensory experiences of touch have common trajectories that could be identified. Identifying these became useful in representing the shape of the workers' apprenticeship and career trajectories with sustained references to how new technologies are, or might come to, change the tactility of their labor. When making sense of and articulating these "touch trajectories." we encountered the challenge of appropriately paying explicit attention to the role of touch while balancing this within the sociosensorial dynamics of the industrial context (Challenge 2).

In responding to this challenge, through this filter, we sought to make legible the pedagogies of touch that permeated the vibrant social and sensorial environments of both industrial sites. For example, in the glass factory, our analysis showed a common trajectory was where new workers gradually learned to "handle the heat." The pedagogies and practices that informed this trajectory included social exchanges with colleagues where workers were made fun of for not being able to hold hot items for long (e.g., being called "fairy liquid hands"); laborers working together to reduce the transfer of heat through contact (i.e., spraying air into a colleague's boots while standing on the machinery); continued practices that resulted in workers being able to perform manual tasks in less time close to the heat or becoming skilled in utilizing various technologies to distance themselves from the source of heat; and through a process of desensitization to the sensory intensities that they were exposed.

Applying this filter was analytically valuable because it enabled us to identify and plot the many ways in which workers learn to touch in those industrial contexts. Again, this was useful to explore how the introduction of new robotic technologies remediated these established trajectories, or not. Importantly, this filter was attuned to foreground touch while avoiding imposing a narrow and restrict analytical treatment of tactile experiences alone. The main value of this filter therefore was as a concept that navigated Challenge 2 (*striking an appropriate balance between touch and other factors*).

Touch Drivers refer to the various factors that drive touch to be done in certain ways and to be performed by particular people or machines. In other words, by applying this filter, an ethnographer is deliberately seeking to capture and critically explore the forces (e.g., economic, social, political, technological) that structure the shape of the tactile landscape or frame the common touch trajectories that were identified.

As indicated earlier, the guiding model of tactile apprenticeship is not just about learning to touch through touch but also requires the ethnographer to take notes of the networks, relations, routines, and meanings that encompass and sustain touch practices within the field. When talking about labor and "touch" within the industrial contexts, it was common for participants (manual laborers, factory managers, and office staff) to calculate or estimate the monetary cost or productive value of a manual touch versus automating that task. This economic framing of industrial touch was so prevalent and powerful that it became a challenge to escape this discourse. We developed and applied this filter in response to this and to sensitize our analysis to other factors that are also important dynamics in framing touch and thereby navigating Challenge 3 (being able to *escape the economic framing of touch*). We applied this filter with a view to capture and critically explore the full range of factors driving

the formation of the tactile landscapes and shape of the touch trajectories that we had been describing.

Two types of ethnographic encounters were important in assisting these inquiries; (1) communicating with participants during a joint observation of a touch task asking "why it is done like that?" or "why do these people get assigned this job?," following responses to probe on issues of class, gender, nationality, and so on; and (2) documenting and analyzing emotive exchanges where articulations of dirty and dangerous touch were presented and contested. Emotive or charged exchanges exposed power relations and driving forces that organized the tactility of labor in both sites in ways that extended the analysis to wider cultural, social, and political themes. For example, there were many powerful moments that foregrounded how certain forms of (dirty or dangerous) touch were assigned to genders. Female waste pickers would be overwhelmingly stationed on the main section of the line where their perceived ability to "multi-task" was given as the rationale. Whereas male pickers were often stationed in the cabin for their perceived tolerance to handle dirtier materials and pick larger/heavier items. There were also powerful and uncomfortable examples in the waste management center that brought nationality and migrant status into focus as driving forces that shape how touch operates in that industry. One example here is how office staff at the waste management center discussed the almost exclusive migrant status of the workforce of "pickers," implying at times that domestic (UK nationals) would never apply or if they did, "they wouldn't last a week." Other conversations uncovered the racialization of dirty touch, revealing how cultural perspectives of other migrants can frame some peoples' imaginations of future workplaces.

Importantly then, by exposing driving forces (beyond a narrow economic/productivity analysis), this ethnography was able to give voice to important and persistent inequalities that are fused to dirty and dangerous touch. This is valuable because these findings stand in contrast to the revolutionary rhetoric of robotization where laborers will be upskilled and freed from undesirable jobs, leading to greater parity within industry. Instead, by applying this filter that intentionally looked beyond narrow industrial measurements, the industrial cultures in many ways appeared to be resilient to (or unaffected by) the introduction of new technology.

Final thoughts

This chapter has shown the value of bringing attention to touch through sensory explanations of the emergent digital touch technology. We have illustrated how the notion of sensory apprenticeship (see, e.g., Leder Mackley & Pink, 2014; Pink, 2015) in ethnographic practice can be orientated and applied to bring touch in from the margins. We have made this case by presenting ethnographic reflections from research that explored if/how novel forms of technologies *remediate* the social and sensory character of work through changing touch practices. We have shown, with examples from fieldwork, how the model of tactile apprenticeship was key in not losing touch of touch in industrial settings where new forms of robots had recently been introduced. When unpacking the key methodological challenges that we encountered in the field, we introduced three touch filters (*tactile landscapes*, *touch trajectories* and *touch drivers*) as analytical and methodological concepts. These filters are offered as valuable tools for sensory ethnographers who aspire to become tactile apprentices.

In closing, we argue that the distinctive value of our hands-on participatory approach was that it helped to keep touch at the fore while learning about and revealing the daily

experiences of those working in these industrial settings. Therefore, we locate the notion of becoming a tactile apprentice within the broader field of sensory ethnography and promote the approach for its potential for researching emergent digital touch technology. Sensory ethnographic approaches that attend to touch, we argue, hold great value for empirically tracking and anticipating the social and sensory implications of novel technologies. The critical insights of emerging in situ practices that are produced from this will help inform design and implementation of future touch technologies for the betterment of our senses and society.

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13

POLITICAL, ECONOMIC, AND RELATIONAL PRODUCTION OF SENSE

Negotiating sensory inequality and access in research on cochlear implantation in India

Michele Friedner

Time in speech with the Vaidyas

One sultry evening in Kolkata in August 2022, I returned to my blissfully quiet and cool Airbnb room and sent a WhatsApp message to a few friends and family members. The message was a screenshot (Figure 13.1), which says "Time in Speech with the Vaidyas." The screenshot is of a bar chart from my cochlear implant company's app, which I have on my phone, and which allows me to track the time that I spend in speech. According to the app, during the time that I spent with my research associate Rajani Vaidya and her husband Sanjiv—and to be fair, we were also conducting interviews and meeting with families around the city—I spent over 6.8 hours in speech per day. I was surprised that it was not more hours because while conducting research for my recent book *Sensory Futures*, I tracked almost 11 hours in speech one day, while staying with Rajani and Sanjiv. In contrast, time in speech since I have been back in the United States has been under four hours each day, as the second screenshot evidences (my family really does not talk to me enough) (Figure 13.2).

I circulated this screenshot to be humorous but also to point to the fact that I was spending a lot of time listening and that I was tired. I was thrilled to remove my implants at the end of each day. I knew from my research, however, that implanted children often cannot choose to remove their implants because audiologists and speech and language therapists often stress to parents that their children must wear their devices for as many hours as possible. Professionals say things like: "We do not have ear lids and we can hear all the time. So too should your child keep their device on from morning to night. Your child needs to be in speech for many hours per day." To be sure, these screenshots from my phone and these admonitions to parents conceptualize and represent audition as individually possessed and speech is somehow effortlessly beamed into an individual child's ear.

In this chapter, I argue for seeing the senses as politically, economically, and relationally produced and distributed. While sensory studies scholars have stressed that the senses are socially and culturally produced (Geurts, 2002; Howes & Classen, 2014), I contend that we

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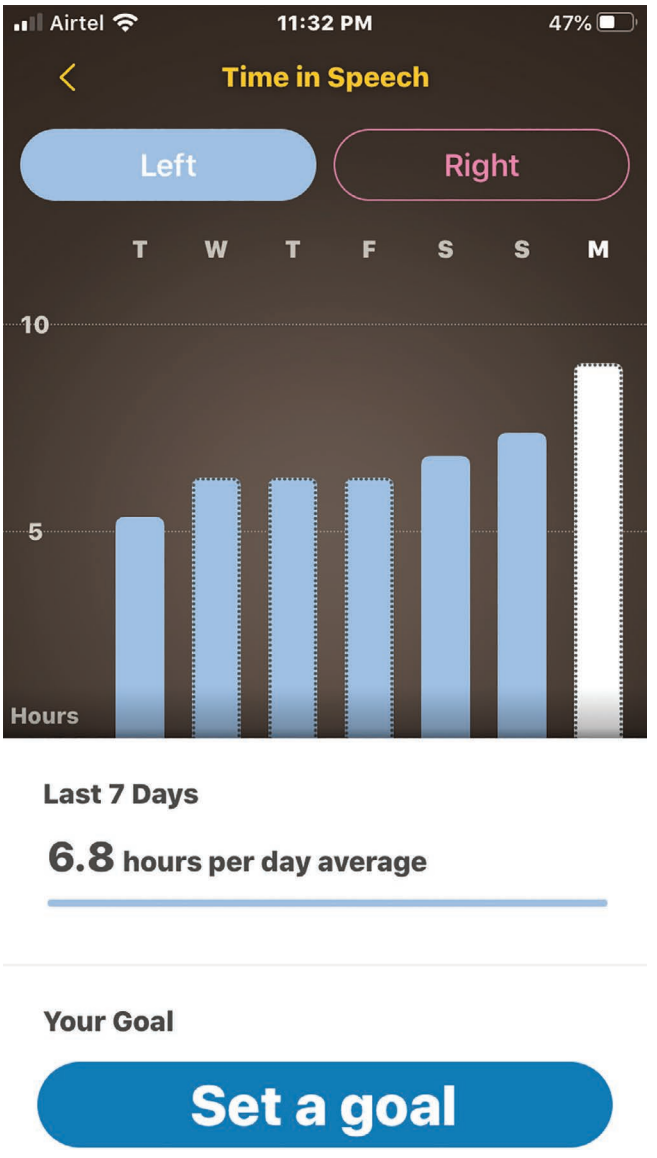

Figure 13.1 A screenshot from the Cochlear App, dated August 15, which features a bar graph of time spent in speech for the last seven days, from Tuesday to Monday, with time in speech ranging from five to nine hours on each day. On the bottom of the screen, it says that the average over the last seven days is 6.8 hours and it asks me to set a goal.

also need to examine how capacities to sense are produced through relations with other people, the state, medicine and re/habilitation professionals and institutions, and multinational corporations, among other actors. Similarly, while other scholars have examined the role of sensory ideologies in exercising power and controlling populations, I analyze how relations between states, multinational corporations, medical practitioners and re/habilitation

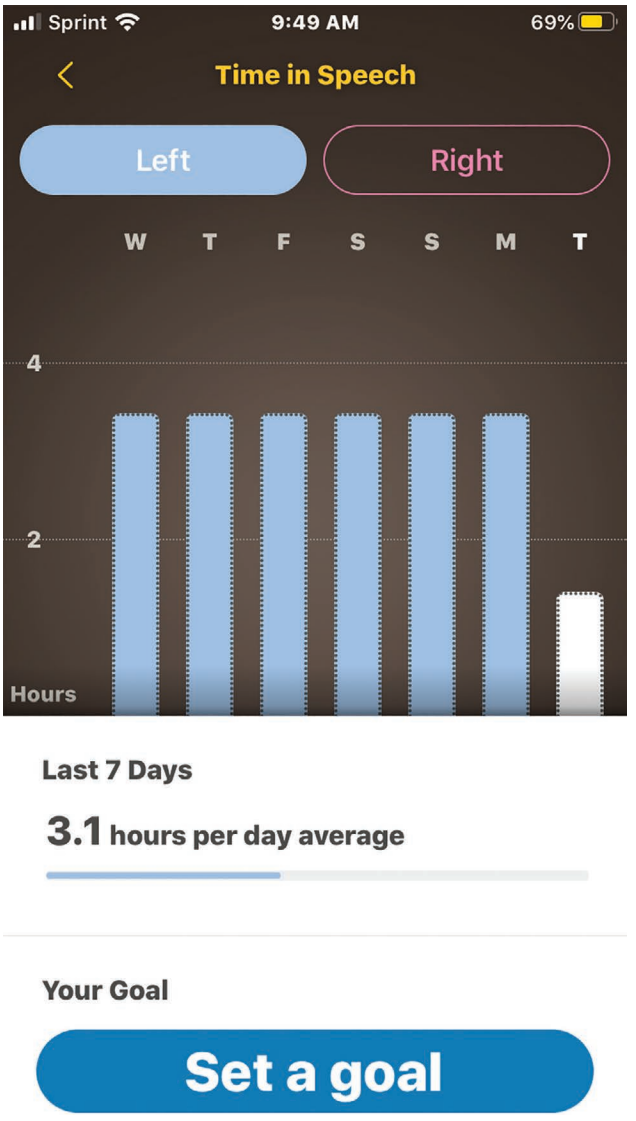

Figure 13.2 A screenshot from the Cochlear App, dated August 30, which features a bar graph of time spent in speech for the last seven days, from Wednesday to Tuesday, with time in speech ranging from approximately 1.75 hours to 3.75 hours. On the bottom of the screen, it says that the average over the last seven days is 3.1 hours and it asks me to set a goal.

workers, and families get under the skin and materially produce the senses. This argument is important particularly considering the emergence of sensory technologies such as cochlear implants, which create new sensory inequalities.

In examining these sense-producing engagements, I place sensory studies in conversation with recent work in disability studies. Geurts (2015, p. 163) notes: "A disability studies perspective is vital for sensory studies to stay grounded in the difficult political reality of

diverse human bodies consistently experiencing exclusion in social organization across the globe." Geurts's statement takes on particular valence in this current moment in which new technologies, such as cochlear implants, serve to exacerbate inequality. Geurts points out that there has perhaps been little overlap between disability studies and sensory studies because of the former's focus on the social model of disability, which locates disability and disablement outside of the body and in discriminatory and inaccessible built environments, policies, and practices; there has been a rejection of a focus on embodied experiences. However, disability studies scholars have more recently gravitated toward a political–relational model of disability (Kafer, 2013, pp. 4–10) which argues for both impairment and disability as categories that are politically and relationally produced and acknowledges that embodiment and sensation are important.

I have been conducting research on deafness and disability in India since 2007. Most recently, my work examines a central government program, called the Assistance to Disabled persons for purchasing/fitting of aids/appliances (*ADIP*) scheme which provides below poverty line children with cochlear implant surgery, a cochlear implant processor, and batteries and spare parts for up to three years, as well as mapping and therapy for two years post-implantation.[1] I have also been tracking the growth of India's private cochlear implant market and the ways that cochlear implantation is increasingly held up as a gold standard in intervention for deafness internationally (Zeng et al., 2008). I learned in my research that after the ADIP scheme warranty period is over, the state pulls back and families are left to maintain cochlear implants on their own and thus enter into complex and often punishing dependencies on cochlear implant manufacturers. In addition, I learned that in India and elsewhere in developing countries, children receiving implants through the ADIP scheme and lower-class families buying implants on the private market are being implanted behind, with technology that was never or no longer used in the Global North, and do not have access to the latest technology. They use processors that lack noise cancellation features and that do not focus on speech. Similarly, many children are unable to continue using cochlear implants after the warranty period because their families cannot afford to replace cables, coils, batteries, and other components or purchase new processors. I observed that after implantation, families are taught new ways to relate to their children and that mothers are taught to constantly talk to their children without allowing their children to see their lips. Mothers, according to a principal in a deaf school, are supposed to become like "cricket commentators" and talk about everything they see and do. I also found that contrary to what audiologists and speech and language therapists ordered mothers to do, mothers engaged in anticipatory sensing and they intersensed with their children, often scaffolding their children's sensory worlds through the creation of more accessible sensory infrastructures (Friedner, 2022). So much economic, sensory, emotional, social, and technological labor!

Going forward, I draw from research conducted from 2007 to 2022 with deaf signers, cochlear implant users and their families, and other stakeholders. I bring in ethnographic research conducted in schools for children with intellectual disabilities to compare how the shared work of sensing is foregrounded or rendered invisible. I locate myself as a deaf implanted researcher in the field and I think too about how sensory and other forms of access—to interlocutors and field sites—is relationally produced. I draw from a disability studies perspective that refuses to see disability as a source of lack or incompleteness (Kafer, 2013). On one hand, I highlight the fact that children who are implanted behind are at a disadvantage in terms of the "signal labor" (Sterne & Rodgers, 2011) in which they engage. I acknowledge the fact that neuroscience researchers argue that such children—and implanted

people more broadly—are working through what they call "degraded signals" (Stenfelt & Rönnberg, 2009), although I also attend to the degraded machines that implanted people use. On the other hand, I reject deficit framing and stress that it is important to also see these peoples' (and my own) sensorium as whole and complete. I acknowledge this is tricky terrain. In the following sections, I analyze the sensory and signal labor as well as other economic, social, communicative, and pedagogical labor in which my interlocutors and I engage. I also explore the kinds of sensory infrastructures that my interlocutors and I labor to produce.

Sensory infrastructures

I foreground the concept of sensory infrastructure because the government administrators, public health officials, surgeons, audiologists, and speech and language pathologists I interviewed in my research talked about infrastructure constantly: the need for more infrastructure in the domains of newborn hearing screening, early intervention, surgical facilities, and listening and spoken language training. To them, infrastructure meant testing equipment, soundproof testing rooms, surgical operating rooms and necessary surgical equipment, auditory verbal therapy courses, auditory therapy centers with noise-canceling architectural features, transparent online platforms for registering for the central government cochlear implant program, and cochlear implant distribution and repair centers. This infrastructure is made up of visible, material, and often technical structures and institutions. Government officials saw the emergence and expansion of the central government cochlear implant program as an infrastructural project, designed to build and expand surgery and re/habilitation capacity and skill around the country.

However, I do not see infrastructure as solely material and technological. I think beyond the binary of visible and invisible infrastructure (Larkin, 2013, p. 336) to consider auditory, tactile, and other sensory infrastructural forms. I also consider social and pedagogical infrastructures. I think of Lev Vygotsky's (1978) work on the zone of proximal development and the ways that therapists and families scaffold children's development by providing linguistic and social infrastructures through which children can communicate and engage with others; these infrastructures fix ideas of potential and provide children with paths toward becoming appropriately listening and speaking subjects. Scaffolding imprints into and onto the senses through transitory and permanent forms of social and material infrastructures; it molds senses, modes, and relations. Scaffolds create conditions for growth in specific directions, and capability and growth are normatively and prescriptively defined. In clinics, classrooms, and everyday life, parents work to maximize their children's potential development, specifically in relation to age-appropriate listening and spoken language skills. Parents are taught to structure sensory and communicative interactions as interpersonal infrastructure.

Sensory infrastructures include the technical infrastructures discussed earlier as well as authoritative, pedagogical, caring, and social relationships that occur around cochlear implantation, re/habilitation, and maintenance. Infrastructure works on and is worked on by the senses. Christina Schwenkel (2015) notes that "infrastructure, broken or not, often evokes a multiplicity of embodied sensations across the human sensorium." Catherine Fennell (2015, pp. 32, 130) argues that infrastructures "press into flesh" and that, because of ongoing impingement, bodies are not "infinitely malleable." Writing about Chicagoans living in public housing, Fennell analyzes how the conditions of such housing—temperature settings, smells, and the kinds of sociality enabled—result in certain bodily dispositions. How might we think about the ways that infrastructures produce, enable, and constrain the

development of senses and the possibility of sensory experience? I want us to go further than Schwenkel's seemingly already intact sensorium and Fennell's bodily dispositions to consider how infrastructure—and again, political economic and relational engagement—creates possibilities for the making of a sensorium.

Consider these three diverse spaces: a soundproofed early intervention classroom in which four deaf children with hearing aids and implants sit at a small table close together with their teacher while their mothers sit outside chatting; an air-conditioned therapy classroom, brightly lit and full of enticing toys, where a child sits between her mother and her therapist; and another early intervention classroom that is noisy because of a whirling fan, open windows, and concrete floors, in which many mothers and children sit together talking on mats in dyads, raising their voices to be heard above the others who are also talking. How are these spaces different sensory infrastructures? In the first and second settings, children are not allowed to look at their teachers or mothers to lipread and must use only audition. In the third classroom, mothers use visual and tactile cues to talk with and teach their children (and it might be too noisy to hear). Consider the infrastructures of urban primary school classrooms in India, where windows are open to honking traffic and fans click and whir as children sit on wooden benches, surrounded by at least 50 other children, while a teacher lectures or dictates. There are also classrooms in deaf schools in which there are 50 children, the majority without hearing technology, and a teacher who does not sign. What kinds of pedagogical, social, and sensory infrastructures develop in such spaces, and how do they create conditions for specific kinds of sensing, communication, and relationality? And what does it mean for a researcher—deaf herself, perhaps—to conduct research in these (noisy and quiet) spaces? How do we think of the kinds of sensory infrastructures that researchers themselves produce and participate within? And what kinds of labor are required?

A life for a life

On one of our (speech-filled) days in Kolkata, Rajani and I met with a family: a mother, father, and 9-year-old child named Rishi at a fancy coffee shop. We knew Rishi was implanted and we were looking for a quiet place to meet and where we could sit for a while and chat. Rajani and I chose this café after calling it that morning to inquire about crowds and noise levels and we arrived early to secure a table. We were initially panicked as there were no empty tables, the place was noisy with chatter and the sounds of an espresso machine, and we wondered about its suitability in general; it did not seem to possess a particularly inviting sensory infrastructure for a meeting, specifically for one involving implanted people. Eventually, people at a corner table got up to leave and I lunged for their table, pulling over some extra chairs. And then the family arrived, and we started talking. I worried about Rishi and whether she could hear us and whether the environment was too loud for her, but she was more interested in ordering and eating ice cream. As she ate her bowl of chocolate ice cream, Rishi's parents, Rajani, and I started talking. We spoke mostly in Hindi and some English and Rajani translated for me; I noticed it was also noisy for her and that she struggled to hear at times. I also noticed that Rishi was a very vocal 9-year-old when you caught her attention and that she was prone to yelling when someone said or asked something of her that she did not like. Her parents appeared to be on edge, not wanting her to outburst and disturb those around us. (I did not care if she impinged on the gossiping of the well-to-do people sitting in the café.)

At one point, we started talking about Rishi's implants. A few months prior, the family had upgraded from the so-called basic processors that she had received post-surgery. They had

taken out a loan to pay for a pair of new more advanced processors that sit on the head and do not contain a behind-the-ear component like most processors on the market. This new processor also has "intelligent" speech focus programs that filter out background noise and Bluetooth compatibility with tools such as a mini-microphone which can be used in noisy situations to help the user focus only on speech. The new processor also offers the option of using the speech tracking software that I have on my mobile phone but Rishi's father did not have an Apple phone, as was required. He did say, however, that his audiologist had spoken to him about the software and that he thought it was useful. He and Rishi's mother stressed to me that they had spent much time talking to their child and asking her questions, as they had been instructed to by their audiologist and speech and language therapist.

Initially, the family was only able to afford one implant for their child. In addition to applying to the central government ADIP scheme and getting on its waitlist, they had contacted non-governmental organizations, Bollywood stars (letters sent to their homes had been tracked and Rishi's father was certain that the stars had received the letters), government officials, and human resources at each of their workplaces. Finally, they cobbled together funds and were able to pay for one implant. Ironically, just as they were successful in raising funds, their number came up in the government program, but they decided to go with the private funding and to do the surgery at a private hospital. After they observed that their daughter was doing well with the first implant, they decided to go for a second for her other ear. However, they were not successful at raising funds: no one who gave them funding for the first implant would contribute to the second. Responses included: "She has one implant, she can hear, why does she need another?" and "This surgery is not a life-saving surgery."

However, Rishi's parents were compelled to get her the second because the first made so much of a difference, they felt, and the second would help her maximize her potential even further. As such, the family, somehow, made the decision that Rishi's mother would become a surrogate mother for another family. With that money, they paid for a second implant. And now they have a loan out for the newest processors, which they say "offer her more sound and make it easier for her to hear us and to respond." Indeed, what Rishi's parents told me was not dissimilar from the marketing videos made for this new implant processor, videos which feature children talking about how much easier it is to hear with these newer processors. On the one hand, this talk seems like hype, like fetishizing new technology. On the other hand, studies do show that the newer processors do better in noise (Mauger et al., 2017). How to account for the labor in which Rishi's parents engaged? The vital labor (Vora, 2015) of carrying a child for someone else to maximize one's own child's sensory capabilities and potential? The labor of constantly talking to a child?

A bad mother

A week after meeting Rishi and her parents, I sat at a clamorous dinner table in Bangalore with a young couple with 3-year-old twins. One twin was bilaterally implanted, also using the same processors as Rishi. I do not know how this family paid for these very costly processors, but the parents were Information Technology professionals and appeared to have more resources than Rishi's family. The twins were running around and shrieking, making the room reverberate. They were given phones and tablets to quiet down and retreated to opposite sides of the room with their individual devices. Mona, the implanted child, ignored her parents whenever they called her. She stared at her device and while she looked up briefly at the sound of her name, her eyes quickly returned to her screen. Her mother said: "She's

become so resistant and naughty these days. Look at this, she's ignoring us!" While Mona gazed intently at her screen and drowned us out, her father talked about the work that he and Mona's mother did to teach her language, from building cardboard houses and labeling all the furniture and components of the house to teaching her colors using painted popsicle sticks, among other things.

Mona's family was not from Bangalore originally; I had met them a few years previously in another state before Mona was implanted. The family was originally receiving speech and language therapy from a clinic in their previous city. However, Mona's mother received an appealing job offer in Bangalore and the family relocated. After moving to Bangalore, Mona's mother and father looked around for a good therapist with whom to work. They finally found someone who came highly recommended to them and whom they liked. However, this therapist delivered an ultimatum to Mona's mother: she had to quit her job and focus entirely on Mona. The therapist told her that she was being "indifferent" to Mona and that she would ruin Mona's chances at becoming like a "normal" child. Mona's mother tried to explain that she could not possibly quit her job as she was the main earner in the family, and she also felt like she could do both: work and work with Mona. The therapist refused to work with the family and instead assigned them to one of her interns. When Mona's mother told me this story, I was furious for and with her.

I thought of all the mothers whom I met who were instructed to quit their jobs to work with their children. In 2018, I met a mother who had relocated from Chennai to Bangalore with her implanted child and was able to attend a training program with her child because she was a software engineer and her boss let her work at night. She had initially asked the training center's director if a grandparent or a paid caretaker could bring the child and the response was an emphatic "no." I also thought about a mother who said that she could not talk to her child at night because she was so stressed out. She had left her husband and her family to travel to Bangalore with her daughter so that the girl could undergo implantation and receive therapy. Her husband and his family said that there was no use doing anything because she was a girl and would ultimately be married off. This mother refused to accept this, and she resettled in Bangalore on her own with her child and took a job at the institute where her daughter received therapy. The mother said she had "too much tension" and was too tired at night to talk to her child. However, she and other mothers, like Mona's mother, are also providing important sensory infrastructure to and for their children. They make substantial sacrifices for their implanted children and engage in sensory and other forms of labor for them.

Other kinds of signals

On the same research trip in August 2022 that I met Rishi and Mona, Rajani and I also met an 11-year-old boy named Avinash in a village about an hour outside of Kolkata by car (it would take triple that time to travel by public transit). Avinash had received an implant through the central government ADIP program and for whatever reason, it was not working for him: perhaps it was poor mapping or the lack of device maintenance, perhaps the magnet was too strong and hurt his head. In any case, Avinash emphatically refused to wear his implant and when his parents placed it on his head and commented that it appeared to be working, he talked about pain. Avinash's parents listened to his desire not to wear his implant, something that not many families with whom I met did. In fact, audiologists and speech and language therapists often tell parents that if the correct color indicator light flashes on their

children's implants, this means that their children can hear and that they should believe that their children are hearing. Avinash's parents instead decided to privilege Avinash's sensations of pain over the signals emitted by the machine.

Avinash and his parents signed to each other, using a combination of home sign and Indian Sign Language learned at an educational program in Kolkata that he and his mother attended and a deaf school in which he was enrolled. Avinash's mother told me about her daily journeys to and from Kolkata with Avinash, which involved riding a bicycle with Avinash seated on the back to the train, taking the train into the city, and then taking a bus. While Avinash was in school, his mother sat in the open-air atrium of the school and did some piece-work stitching that allowed her to earn some extra income. When Rajani and I visited, Avinash's friend from next door chatted with him in a combination of gesture and sign that Avinash had taught him. I met many children like Avinash who were not happy with their implants or who were not getting any auditory signals through them. Unlike Avinash's parents, however, their parents were not willing to learn sign language.

For example, also in Kolkata, Rajani and I met a 3-year-old boy who used hearing aids. During a therapy session, he fidgeted and looked at a puzzle, not making eye contact with the therapist. After therapy, he had a session with an audiologist and he was completely uninterested in repeating sounds back to the audiologist. I asked the audiologist if perhaps the child could not hear the sounds and he confidently replied that the boy could hear, that he had attention deficit disorder, and that this was why he was not focusing. I asked him how he was so sure about this. He said: "Look, I will go behind him and clap and he will blink." He clapped and there was no blink or any kind of recognition. In this case, and in so many similar cases, children are aided or implanted and professionals think that this is all that is needed, despite the fact that the children are (still) unable to work through the signals to which they are exposed but do not have access to (Hall, 2017). During earlier research in 2009, an audiologist at a flagship audiology institute told me that using older technology was like "riding a bullock cart." I believe that her comment is also true for current "basic" hearing aids and cochlear implants and that medical practitioners, re/habilitation professionals, families, and researchers too need to think about the kinds of signal labor—and sensory labor more broadly—deaf people do.

Sensory access as co-produced in and through research

Returning to the "time in speech" charts with which I opened this chapter and the people with whom I spent time in different sensory infrastructures, I argue for the importance of seeing research as multisensory, multimodal, and multirelational. If I were to set a goal, as my app instructs me to do, my goal would be to spend more time relationally engaging with others and not to have speech directed at me. Indeed, disability anthropologists have refuted the idea of the individual rugged anthropologist (Durban, 2022). How then do we think of research as a shared sensory experience? In my earlier work, I very much focused on the idea of "deaf same" as I worked with deaf signers and we honed in on our shared interest in Indian Sign Language and our shared desire for more ISL in the world. Conducting research in ISL-based spaces was linguistically and auditorily accessible to me in that I and my interlocutors interpreted for each other when we did not understand each other and we did not take it for granted that we all had the same proficiency in ISL.

In contrast to these sensory infrastructures that my interlocutors actively worked to build, in my research on cochlear implantation, I spent time with surgeons, audiologists, and speech and language therapists who were invested in cochlear implantation and producing so-called normal listening and speaking children. It often seemed to me that I too had to be as "normal" as possible in these environments. I felt that I could not openly use Indian Sign Language and I certainly could not bring a sign language interpreter. In some of these spaces, asking for communication access would be an impingement; individuals in these spaces were operating under the assumption that the senses are not relationally produced (although they can be produced through cochlear implant surgery) and that individuals possess their own individual senses. They also saw the senses as constantly in competition and they did not want vision to play a role; they wanted deaf children and deaf people in general to become as auditorily dependent (and thus independent) as possible. Bringing an interpreter would rupture current or future relations as well as access to spaces and I needed to come up with workarounds.

I labored to make these workarounds as relational as possible. For example, at a cochlear implant industry conference in India in October 2019, I recorded talks, brought a research associate who took notes and conducted research during the formal presentations, and I talked to people during coffee breaks and other moments in which I could directly engage (although some of these settings were very noisy). I have worked in other settings with research associates in which they have refused to sense for me: I once asked a research associate if she could tell me what some parents chatting in a playground were saying. I wanted her to listen and then tell me. She did not want to do this as she said it would be eavesdropping. We then had a conversation about sensory reach. Similarly, I asked the same research colleague what mothers were talking about in a noisy classroom in which we were conducting participant observation. I could not hear, and it turned out, neither could she.

I end by discussing another research site that I visited in August 2022, the Latika Roy Foundation, a non-governmental organization/foundation located in Dehradun, that among other things has a school for children with intellectual disabilities. I was fortunate to spend (not enough) time in a classroom where I observed that the classroom's two teachers were communicating in multiple ways with the seven or eight children in their classroom. The teachers were using ISL lexicon, pictures, writing, and facilitated movement to communicate with and teach their students. They were scaffolding interactions through the use of many modalities and senses, and ultimately, they were recognizing all kinds of signals—from a twitch of a head to a blink to a vocalization—as communicative. Communication, and sensing, was explicitly framed as relational, as *lena* and *dena* or taking and giving. Spending time in this center made me furious for the deaf children with whom I conduct research, the majority of whom are not exposed to such sensory richness. If anything, deaf pedagogical spaces are often overly focused on audition and if deaf children are lucky, they might be able to lipread or copy text from a blackboard. The teachers at Latika Roy Foundation were on the vanguard of what communication—and sensory engagement more broadly—could be. This educational setting posed a (counter) example of what sensory possibilities might exist alongside or in the absence of technology in addition to spotlighting the relational and non-individualized work that goes into the production of sense.

How do we think about the production of sensoria and the structural limits that exist for their un/making while also recognizing existing senses as valuable and whole? In this

chapter, I have labored to demonstrate that sensing is politically, economically, and relationally produced. The emergence of sensory technologies such as cochlear implants might enable the production of sense, specifically a single sense, while simultaneously introducing sensory inequalities. To examine the ways that the senses are produced beyond the individual and the machine and beyond the realms of the social and the cultural, we must attend to the sensory and other labor performed by diverse stakeholders, here families and mothers in particular. We must also think about the sensory infrastructures that exist and the ways that they establish conditions of possibility for specific ways of sensing. Finally, researchers must attend to their own sensory positionalities and the ways that their sensing is facilitated and aided by specific sensory infrastructures.

Note

1 Unlike a hearing aid, a cochlear implant bypasses many parts of the acoustic hearing system and electronically stimulates the auditory nerve in order to produce hearing. A cochlear implant has two main parts: a surgically implanted component (the internal part), in which the most significant element is the electrode array, and an external processor. The battery-operated processor is typically worn behind the ear and has a cable with a magnet in it that communicates with a receiver. The receiver transmits sound information to the electrode array. Each electrode stimulates a specific frequency range in the cochlea, which then stimulates auditory nerve fibers associated with that frequency. Adjusting to implant hearing takes time and work. Two to three weeks after the electrode array is inserted, an audiologist activates the external processor using proprietary software. The audiologist then adjusts the settings for each electrode and creates a range of hearing between a threshold level (the least amount of electrical stimulation possible) and a comfort level (the loudest sounds that the person can tolerate). This is called "mapping" the implant. The goal of mapping is to optimize the implanted person's access to sound by adjusting input to the specific electrodes. As the person becomes accustomed to the implant, the map needs to be adjusted, and typically the person will return to the audiologist frequently after the initial activation and mapping. Most people who receive implants can expect to have a stable map established by eight to eighteen months after activation.

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PART 3

Sensuous and atmospheric ethnography

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14
RE-SENSING THE SENSORY
Evoking senses in a troubled world

Paul Stoller

During fieldwork in the Republic of Niger, I would visit the master herbalist, Soumana Yacouba. On blisteringly hot and windless mornings, during which the heat haze blanched the sky, I would sit next to Soumana on a palm frond mat that he had rolled out in the shade of an acacia tree. Soumana had long ago found this spot at the edge of the Petit Marche, a space peacefully distant from the dust, din, and nose-crinkling odors that emerged from more centrally located market displays of dried fish and spices. Every morning he spread out his medicines—bundles of dried herbs, resins, and tree barks. For a modest fee, he would prescribe them to his clients.

During those sessions, clients would come to Soumana's spot to talk to him about their conditions—sores, stiff joints, painful backs as well as night sweats, insomnia, sleepwalking, and nightmares. Soumana would listen to them carefully. He had a set of piercing black eyes that contrasted with the soft texture of his copper-skinned face—a combination that suggested intensity of purpose as well as kindness and care. When clients finished their tales of distress, he would tell them how to use his medicines.

"Make certain," he would tell them, "to follow my instructions carefully. If not, the medicines will not work."

Following the death of my mentor, the master healer, Adamu Jenitongo, I asked Soumana if I could study with him to learn about medicinal herbs. Because he knew and respected my mentor, he agreed to talk to me about the medicines he prescribed. Soumana would tell me a plant's name in Songhay and then explain its medicinal application for various conditions. The disorders ranged from malaria or asthma (village illnesses) to spirit possession and sorcerous curses (bush illnesses). He would have me smell and taste each of the plants. In this way, I became familiar their sensory properties.

After one month of visits, Soumana invited me to accompany him to his home to have lunch. "My wife is a very good cook," he said, "and I want you to see where I live."

"Are you not a *do*, a master of the river. Do you not live at river's edge?"

"No, I live on the outskirts of town. I only go to the river to make offerings and search for plants."

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We found a taxi and headed east toward the edge of town. The paved road gradually gave way to sandy tracks. Mudbrick and cement structures, the most common housing units in the city, gave way to compounds of straw huts separated from one another by millet stalk fences. Soumana lived in one of those.

As soon as we entered the compound, the chocolatey aroma of *soumbala*, a delicious West African spice, permeated the dry air. Soumana introduced me to his wife, Ramatu, and his young children—three girls and two boys. He then took a deep breath of sauce appreciation. "I told you that my wife was a good cook!"

"Today," she said, "we have rice, sauce with soumbala, and meat."

"Thank you for having me, Madam," I said, excited by the prospect of a wonderfully prepared traditional lunch.

Soumana led me into a straw hut where there was an unrolled palm frond mat that covered a floor of soft sand. On one side of the dwelling, there was a four-poster bed draped with a blanket featuring a multitude of patterned stripes in red, black, green, and blue. Someone had rolled-up the bed's mosquito netting. Several large clay water jugs had been positioned on the floor adjacent to the entry.

Once we were settled, Ramatu brought us a large porcelain bowl of rice and sauce which she put between us. One of his sons brought us bowls of water for drinking and handwashing. The meat was tender and delicious, and we ate slowly, savoring the taste.

"Your wife is a good cook," I said thanking them both for the meal.

Soumana nodded. "You want to learn more from me?"

"Yes," I said. "Are you willing to teach me more?"

"It's not my decision," Soumana declared. He looked up to the ceiling of his dwelling and began a conversation with his ancestors. He described me and told them of my apprenticeship to Adamu Jenitongo. He talked to them about my character and personality. He nodded his head and listened. This repartee went on for about 10 minutes. Finally satisfied, he looked at me: "They said that I can teach you, but not everything. The special secrets remain in family." He paused moment and chuckled: "They seem to like you."

"But I couldn't hear the conversation," I said.

"Of course not," Soumana said with a smile. "You have to learn how to listen before you can hear the voices of the ancestors" (Stoller, 2013).

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This encounter between Soumana Yacouba and his ancestors was one of many field episodes that challenged my existential foundation in the world. During my time in the Republic of Niger, my teachers exposed me to spirits and witches that I could not see, feel, hear, or smell. My mentors liked to point out my sensory inadequacies.

"You look but don't see," they would tell me.

"You listen but don't hear," they suggested.

"You touch but don't feel," they insisted.

They claimed that it would take years of careful training for me to learn how to see, feel, and hear—sensations that would enable me to converse with ancestors, sense the Songhay spirits, or feel the approach of death sorcery. They challenged me to re-sense the sensory and focus my attention upon the sensorial foundation of being-in-the-world. Those challenges compelled me to find different ways of writing ethnography.

The patience of my mentors, their teachings, and my experiences over many years helped me to improve my capacity to sense. More importantly, they helped me to understand the power of sensory experience. In the end, the challenge of describing the sensory dimensions of social worlds convinced me that re-sensing the sensory is a powerful way to meet the obligations of social description in a turbulent world—a world in need of wisdom, both sensorial and Indigenous, that could help to chart a path to a more viable future (see Stoller, 1989a, 1989b, 1997, 2008, 2014, 2023). In what follows, I describe other encounters that sharpened my sensory awareness and in so doing expanded my understanding of the human condition.

Encountering the Atakurma

My teacher, the late Adamu Jenitongo was a *sohanci*, a healer who traced his descent patrilineally to Sonni Ali Ber, the great fifteenth-century Songhay King who was renowned for his sorcerous power. Knowledge of Ali Ber's powerful practices has long been passed down to his descendants, including, of course, Adamu Jenitongo.

As a sorcerous practitioner who can heal and harm people, the *sohanci* is a figure who lives at the existential edge of life. They are the intermediaries between village and bush, between the social and spirit worlds, between health and illness, and between life and death. The sohanci's familiar is the vulture (*zeyban*), a creature that partakes of the dead to live in the present. The vulture represents substantial power and mystery; it flies high and travels great distances. To emulate their familiar, sohanci, who have been known to fly great distances in the dark of night, usually wear black. Like the vulture, they present themselves as mysterious beings who are feared and respected.

Like his father and father's father, Adamu Jenitongo lived far from the center of the village. In the Songhay world, people do not want to live close to a sohanci for fear of their over-profound power, a force that can burn those who get too close. And so, the sohanci are peripheral figures par excellence. They live a life filled with what John Keats long ago called "negative capability"—the capacity to live with incompleteness and contradiction. In the arena of negative capability, one is compelled to pay attention and accept the experiential state of "not knowing your front side," to quote a Songhay incantation, "from your back side" (see Dewey, 1929). In such a place, one brutally confronts the limits of comprehension.

Consider a "not-knowing-your-frontside-from-your-backside" event that I experienced at the edge of the village. I had been living in my teacher's dune top compound for almost two months. My mentor had been teaching me about the curative properties of plants, knowledge he would only convey to me in *cino bi*, "the black of night," which meant that I often felt sleep deprived. One night after a black of night session, braying donkeys and howling dogs woke me from a fitful sleep. As I got up from my bed, the brays and howls grew louder, heading in my direction. As I approached the closed door, I heard footsteps and high-pitched vocalizations—a kind of strange gibberish. Then came the screechy scrapes of fingernails on corrugated tin—my door. Frozen in place, I wanted to open the door but lacked the courage to do so. The screechy scrapes continued followed by a high-pitched whine that sounded like a child's voice. Slowly the sounds moved away as did the donkey brays and dog howls. Stealing all the courage I could muster, I finally opened the door. A ribbon of dawn orange stretched across the eastern horizon. In the distance, I saw dogs leaping.

Moments later I woke my teacher's son and asked him if he had heard anything.

"No, I didn't hear anything," he said.

Needing verification, I approached Adamu Jenitongo, who was already awake and told him what I had experienced.

"You heard it, too?"

"Yes, Baba, what was it?"

"The *Atakurma* came to visit."

"The little people—guardians of the bush?" I asked. I had heard tales about the Atakurma but had never encountered them.

"You heard their squeaky little voices, and the dogs and donkeys?" He paused. "The dogs and donkeys get excited when they come."

My teacher explained that on Sundays, a day of the spirits, he would take a bowl of honey or milk into the bush and leave it for the Atakurma. "It's been some time since I last brought them an offering. They came for honey or milk." He shook his head. "You heard that?" (Stoller, 2023)

What I heard brought me to the edge of comprehension.

Had my senses betrayed me? Had I been dreaming?

Could the Atakurma be more than a sleep-deprived hallucination?

Perhaps I had I partially come to my senses in the Songhay world?

During my 17-year apprenticeship, Adamu Jenitongo guided me to the portal of an incompressible world the experience of which often challenged my senses—of reality.

Is it possible for spirits to take the bodies of human beings?

Can a person like Adamu Jenitongo have nocturnal conversations with his ancestors?

Can a Songhay diviner hear the voice of the Nya Beri, the spirit whose voice uncovers the past, peers deeply into the present, and discovers the future?

Can Dongo, the mercurial thunder god, kill people who knowingly or unknowingly violate the sacredness of his land?

Can the sound vibrations of a practitioner's magical incantations sicken or kill a person?

Can witches steal a person's soul, condemning them to chronic illness and/or death?

Can a person have a conversation with the Atakurma, the little people of the Songhay bush?

In the aftermath of my nocturnal encounter, I remembered that Adamu Jenitongo had once told me that human beings, who live in the village, cannot control the wild forces of the bush. To understand the bush, he counseled, you must surrender to it and let it penetrate your being—a transformative process fraught with personal risk and existential vulnerability. Faced with a similar kind of philosophical incomprehension, the nineteenth-century philosopher Friedrich Nietzsche offered some advice about how to absorb the disturbing particularities of not-sensing—the remedy of art, a remedy that requires re-sensing the sensory, a lesson that is underscored when one attempts to bring rain to a drought-plagued land (see Nietzsche, 1872; Stoller, 2023).

Re-sensing rain

It's not easy to live in Niger. The climate is hot and dry which means that Songhay people, most of whom are farmers, pay particular attention to the weather. The dry season typically lasts from October, the time of the millet harvest, until May, when the first storms wet parched fields. The first rains of the season are usually few and far between—just enough moisture to plant seeds in the fields. If it rains a few times in June and July, the millet stalks

emerge from sandy soil and begin to grow. The peak of the rainy season is in August when it may rain five to ten times. During this time, the millet grows tall and sprouts seeds. In September, it continues to rain but less often. The millet seeds are green—not yet ripe. In October, also known as the little hot season, the hot sun browns the millet seeds, which means they are ready for harvest.

This sequence of necessary climatic events is obviously delicate—so much can easily go wrong. The rains can come late, which delays planting. If it rains sufficiently in May, but there are no further rains in June and July, the already planted millet seeds may not germinate or if they do, many of them will shrivel and die, which means that the August rains will not produce substantial millet growth. If all goes well, meaning the right sequences of rain occur in May, June, July, and August and the millet matures, too much rain in September can rot stalks and seeds. Any deviation from the necessary sequence of rain events, then, can be catastrophic, resulting in a poor harvest of millet. Poor harvest years invariably mean widespread food shortages, famine, hunger, disease, and death.

During one of my hot season fieldwork visits, a curious rainfall pattern developed. On five afternoons from mid-May to mid-June dark clouds formed on Tillaberi's eastern horizon. A strong east wind whipped up, forming a looming cloud of dust. That same wind carried the smell of rain. In the normal scenario, a thick suffocating wave of dust would slam into Tillaberi and eclipse the sun. From within the dust cloud, there would be thunder, which for Songhay people, is the voice of the thunder god, Dongo. That sound signaled that rain would soon follow Dongo's path into Tillaberi and fall upon the millet fields. The next day local farmers would be ready to plant.

When the expected storms approached Tillaberi that year, something curious occurred. The cloud would bifurcate, moving to the north and south, which meant that no rain fell upon Tillaberi and its surrounding millet fields. Given the severity of the situation, town elders asked Adamu Jenitongo to stage a spirit possession ceremony. The ceremony took place on a sweltering Thursday afternoon—the principal day of the spirits.

Streams of musicians, praise-singers, spirit mediums, town officials, and spectators flowed into Adamu Jenitongo's dune top compound. Soon the violinist's one-stringed violin began to *cry*. Drummers struck *clack-roll clacks* on their gourds. The sacred sounds echoed loudly in the hot air above Tillaberi, a signal for the spirits to swoop down from the sky and take the bodies of their mediums.

The seductive music compelled the impassioned dancing of women. After the women had danced for close to one hour, my teacher, bone thin and spry in his frayed black tunic and baggy black drawstring trousers, walked up to the musicians.

"We need Hauka music. The Hauka can tell us what we need to know."

The musicians began to play Hauka airs, hoping that the *old* sounds might entice the militaristic spirits of colonization to colonize a medium's body. In the searing heat of late afternoon, the musicians played and played. No Hauka came to claim the bodies of dancing mediums whose sweat-soaked clothing and sagging shoulders suggested their exhaustion. Finally, a Hauka came into the body of a young man, Daouda, himself a master of the one-stringed violin. His Hauka, Istambula, stomped in front of the musicians, saliva frothing from his mouth.

"I am Istambula," he announced. "I know why the rain is not coming to Tillaberi."

"Why is that?" Adamu Jenitongo asked the spirit.

"Someone blocked Dongo's path." Putting his arm on my mentor's shoulder, Istambula pointed to a car, a rusty Citroen Deux Cheveaux that had been parked outside the

compound's millet stalk fence. "You, me, and the *anasaara* (white man) will go into the bush." He pushed his finger into my chest. "Anasaara," he said, "you drive us into the bush. In the name of Bongi (God) the bush is dangerous. But we'll find the bad medicine."

The Citroen's owner overheard our conversation. He was a slight middle-aged man with a shaved head, who wore a loose gray shirt over a matching pair of trousers. Moussa approached me, Adamu Jenitongo, and the spirit, Istambula.

"I heard you," he said to Istambula. "You can use my car, but I will drive you into the bush."

Moussa then rolled back the car's canvass roof. Adamu Jenitongo and I squeezed into the narrow back seat. Istambula, still frothing saliva and bellowing about treachery in Tillaberi, got in next to Moussa and stood up in the roofless car. He pointed to a path that led to the east. "I'll show you where to go."

We followed tracks that took us across a barren laterite plain. When we attempted to cross a wadi, the tires got stuck in deep sand. Moussa, who was used to the difficulties of driving in the bush, put some metal tracks under the rear tires, which, when we pushed forward, dislodged the Deux Cheveaux. Liberated, we drove down an embankment toward a patch of green that marked a water hole. A sandstone butte with jagged streaks of red and orange rose in the golden light of late afternoon. As the pond's water came into view, Istambula shook violently and used his fists to pound the edge of the windshield. With his forefinger, he pointed to a tall termite hill.

"Stop," he ordered. "Stop."

He bounded out of the car and strutted toward the termite hill.

"Look here," he said. "Look here."

We all got out and inspected the termite hill. Istambula fell to his knees. Using his fingernails, he scraped at the hill's mud baked base. He stood up, pounded his chest, and bellowed. "Here it is. Here it is."

At the base of the termite hill, we noticed the roundish opening of a buried antelope horn.

Moussa found a sharp-edged stick and began to scrape the sunbaked mud around the horn. In time Adamu Jenitongo extracted it from the hill. When he shook the horn, several amulets that had been stuffed inside fell to the ground.

"Very bad medicine," Tillaberi's sohanci said. "Someone wanted to spoil the rain. We have to fix it."

The sohanci asked us to find some kindling to build a fire. When the fire was ready, he asked the bush for forgiveness. He then threw the antelope horn and amulets into the fire, which, he said, would kill the spell.

We returned to Moussa's car—three men and one spirit, who continued to speak in tongues, froth at the mouth, and complain about deteriorating social conditions in Tillaberi.

Istambula pointed toward the West. "We must leave the bush before nightfall. The bush is dangerous at night."

When Istambula sat down in the front passenger's seat, the spirit slipped out of its medium, who slumped in his seat and lost consciousness.

Adamu Jenitongo leaned forward and shook Daouda, which revived him. He coughed several times and asked for water.

The sohanci pointed his forefinger skyward and said: "With the help of the spirits, we found bad medicine, which they put on Dongo's path."

"Why?" I asked.

"I don't know," my teacher replied, "but that bad medicine did move the rain to the north and south." Adamu Jenitongo looked back at the termite hill. "We'll have to make offerings to the spirits of the bush to set things right."

For four days, the sohanci recited incantations to restore harmony between village and bush. For the first three days, he sacrificed chickens. On the fourth day, he sacrificed a black goat—which is Dongo's familiar.

Five days later rain came to Tillaberi.

Six days later the villagers trekked to their fields and planted millet.

That year the harvest was a good one (Stoller, 2023)

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How could the spirit Istambula in the body of a spirit medium, Daouda, sense the location an amulet buried in the base of a termite hill situated in the bush many kilometers east of Tillaberi? The sounds, smells, and tastes of spirit possession compelled a spirit to enter the body of a medium, who, his senses tuned to higher frequencies, directed us to a spot in the dangerous bush where someone had buried an amulet to spoil the rain. The harmony of the bush had been disrupted. As Adamu Jenitongo knew, it would take the heat of fire, the sounds of incantations, and texture of sacrificial blood soaking into the soil to counteract the hurtful curse and restore the essential balance between bush and village—a re-sensing of the sensory to bring rain that would ensure a good harvest, which, in turn, would bring health and vitality to the community. Put another way, one had to re-sense the sensory to demonstrate the necessary respect for the bush, a fundamental respect for the power of nature.

Re-sensing nature

Early one morning during ethnographic fieldwork in Tillaberi, Niger, the hottest town in the hottest country in the world, I sat on a beautifully woven palm frond mat in the shade of Adamu Jenitongo's thatched spirit hut. For several months, I had been living in my mentor's compound at the edge of village. At sunrise, Adamu Jenitongo told me that he wanted to talk to me about important matters.

Shortly thereafter, he arrived with a brazier full of hot embers. His grandson followed behind bringing a porcelain platter on which he had placed a teapot, one large water glass, and two shot glasses.

Adamu Jenitongo poured water into the teapot and measured a shot glass full of strong Chinese green tea and put it on the embers. Soon the aroma of steeping tea filled the air. "We'll drink tea and talk about life."

Not knowing how to respond, I sat quietly.

When the tea water boiled, my teacher added sugar and went through the pouring ritual, emptying the steeping tea into the water glass and returning it to the teapot—three times. Finally, he poured tea into our shot glasses, and we began to sip.

As we sipped the strong tea, we looked at one another for a long moment.

"You have been coming here for years," he said, breaking the silence.

I nodded.

"And you've learned a great deal."

"I have much more to learn," I admitted.

"You do," he said. "But today I want you to open your ears and understand what's important."

"I am listening, Baba."

He turned his head toward the east and looked beyond the edge of the village to take in the bush—wild, uninhabited space where powerful spirits live. "Good," he said, still looking at the bush. "Times are bad. People have lost respect for the old words and for the old ways." He turned and looked at me.

> Our fathers and mothers understood how bad it is for people to speak with two mouths and feel with two hearts. People who speak with two mouths and feel with two hearts anger the spirits of the bush. When the bush is angry there is not enough rain. When the bush is angry there is too much rain. When the bush is angry locusts eat our crops and sickness kills our people.

"He sipped more tea."

"Several cranes flew overhead. A donkey brayed in the distance."

"Shaking his head, my mentor continued."

> "Every day our people do things to anger the bush. Every day I make offerings to the bush to set things right, to bring a one-mouth, one-heart balance to the world. That is what the elders taught me. That is my work."
>
> He finished his tea. "That's what I want to teach you. I hope that my work can become your work."

***

The bush is angry these days. After the temperature in Portland, Oregon, soared to more than 112° in June of 2021, is it not perhaps time to rethink our two-mouths/two-hearts priorities? In the summer of 2022, wildfires and floods have brought on mass destruction and the loss of life in Europe and North America and Asia. Is it not perhaps time to critically assess our two-mouths/two-hearts behavioral practices? COVID-19 persists and continues to bring more disease, death, and social despair. Is it not perhaps time to reform the environmentally destructive extractive practices that anger the bush? Is it not time to acknowledge the wisdom of people like Adamu Jenitongo and admit that human beings who live in the village have never been the masters of the bush?

It is no exaggeration to state that the world is in trouble. Global warming has precipitated frequent superstorms, permafrost melt, pervasive flooding, sea-level rise, coastal erosion, and droughts that, in turn, bring on water shortages. Social and political instability is widespread in Europe, the Middle East, and the United States. It is common knowledge that our routine social, cultural, and political and ecological expectations have been undermined. In the July–August 2021 edition of *Anthropology News*, five political anthropologists offered a collaborative manifesto for doing anthropology in an admittedly troubled world. They wrote passionately and intelligently about the need for present and future anthropologists to be more collaborative and more politically engaged. They mentioned the need to expand our research methodologies and recalibrate our disciplinary priorities. In a time of crisis, their manifesto was a multifaceted call to action. One of the contributors, David Vine, wrote: "The COVID19 pandemic, the global economic crisis, the unprecedented uprisings

for justice have demonstrated the urgency of dedicating our skills, anthropological or otherwise, to healing the world" (Vine et al., 2021, n.p.)

It is important that scholars read and act upon the insightful thoughts expressed in the collaborative manifesto. In articulating his thoughts about doing anthropology in a troubled world, David Gellner, another contributor to the Collaborative Manifesto, wrote convincingly about the need for more collaborative research efforts. "Accomplishing multisited, multiscaled ethnographies requires," he stated, "teams of researchers with at least partially shared agendas, followed by collaborative—and doubtless painful—writing up" (Vine et al., 2021, n.p.). I suggest that we add another dimension for doing scholarship in a turbulent world: the use of analytically informed sensuous narrative to compel readers to turn the page—re-sensing the sensory. In my recent work, I have suggested that scholars can produce rigorously researched narrative works that are also attuned to an age of crises. Those works, in turn, can connect to a broad audience of people the insights mentioned in the Collaborative Manifesto. Accordingly, artful ethnographic writing, which is sensuously contoured writing, is a powerful way to extend much-needed knowledge to a world in dire need of wisdom.

Re-sensing the sensory requires storytelling that evokes space and place, hones in on the sonority of vibrant dialogue, and depicts the idiosyncrasies of character. These creative moves result in works in which wisdom jumps from the author's page to the reader's mind. The Collaborative Manifesto calls for revamped anthropological *telling*, which is vital to our disciplinary future. Telling, after all, is a necessary condition in any design for (disciplinary) change. But is there not more scholarly space for *showing*—more evocation in artful storytelling? Through empirically informed sensuous storytelling, *showing* can be combined with *telling* to powerfully communicate important scholarly insights to the public. A more intense focus on writing-as-art can ensure that our slowly developed insights can become fundamental elements in the public sphere, elements that contribute directly to healing a world confronting a set of life-threatening social, cultural, ecological, and political crises.

Acknowledgment

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15
ELEMENTAL

Kathleen Stewart

Here I approach the elemental as an environmental milieu for forms of life in the haphazard precisions of materialities, affects, sensations, and substrates (Engelmann & McCormack, 2018, p. 2021). In the fluid ontology of what comes to matter before and beyond the incidental perceptions of a humanist subject trying to story itself, even the human is elemental. Interpretation entangles in the intra-activity (Barad, 2007, p. 184) of animals, colors, plants, electricity, weather, trash, bodies. Listening resonates (Nancy, 2007) in the allure of what can't just be brought to account (McCormack, 2015) but circulates, flickers, echoes, shifts, and suspends in singularities tangible and energetic. The insensible murmurs within the sensible (Barad, 2015, p. 394). A voice modulates to the call of a branch rustling.

I write as a mutable subject leaning, with other elements, into the speculative, immanent, weight of unequal impacts, (dis)orientations, and all the elsewheres and otherwises of what is not finished or fixed. There are configurations of light, saturations of color, articulations of elements pulled into patterns of attraction and expression (Barad, 2015, p. 395) in the ontopoetic performance of diffraction, precipitate, timbre, vibration, and pulse (Morton, 2015, p. 273).

Impersonal world

Wind and trees and creatures are a world's artists (Cohen, 2011) before and beyond humanism's preoccupations with subjects and objects and signs. The impersonal is a force of accumulative aside-ness in the precision of a light's texture and blur, a supple incrementalism in the iterative materializations of echoes. Beaches and flies, turtles and ice, the fugitive opportunism of chipmunks are embryonic stirrings and condensations of what's happened. Sensuality involutes in the aerial, lambent vibrancy of a plenum of elements (Lingis, 2018, pp. 51–52).

Things breach or hold in the untimely and uncanny intimacy of what touches and responds (Barad, 2015, pp. 401–402). Shellfish and acorns are crushed or buried. Rock compresses, sediments, extends as magma or as granite cap resting on the surface of the earth. Unconformities squeeze upright from the earth's core cutting through the horizontals in the shape

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of an event (Raffles, 2020). Forests of multiplicities stand together for a time: once dire wolves and giant beavers, once giant armor-plated fish, once again woodpeckers and indigo buntings, once mass extinctions and amniotic eggs, once bricks, broken glass, car parts (Raffles, 2020, p. 20). A laugh lays buried in a sad sack of a body.

Agency or intention is not actually a magical path forward but a gesture at a state of exception that can breed accidents or a faux pas. At the pool, a woman born in Hitler's Germany stutters a story of her childhood abuse to eyes momentarily trained on her but drifting. In Scotland, a guy cleaning up his father's farm unwittingly takes a hammer to the ancient Odin Stone, through whose hole newborns had been passed and weddings framed, breaking it up into tiny pieces to haul away with the farm scrap (Raffles, 2020, p. 72).

Even in the isms built up to lead us on, we can sense that business as usual is a continuous process of composition and decomposition. Humanism's well-mannered claims grow a little long in the tooth. Some "we" settles in and bloats at a dinner party where heterosexual marriage sediments into a ring, a bow in the hair, a blowhard voice, a series of stupid jokes. Normativity is an awkward and generative attachment to sitting next to your spouse or some other pragmatic of living that poses as an opportunity to follow and threatens to twist off into a defeat or a capacious mistake.

In "the ongoing thought experiment the world performs with itself" (Barad, 2015, p. 396), nature or matter is already a patchwork of parts, an experiment with its own infinite alterity.

The turkey buzzard is the only bird of prey that can smell carrion miles away; its face is a set of giant nostrils in a featherless cavern, moist and pink. The other birds, unsmelling, follow its screech, its lift off, forming a pack.

A street

On a street in Santa Cruz, leaf blowers are the enemy. The noise pollution, the impurities, churned up in tiny particles that change the composition of breathing. And when you walk in a neighborhood over decades, you get a little superstitious. For years, they've been digging up ancient gas lines at that end of the street, you picture them blowing. The shortcut to the beach at the other end of the street is cut off by the collection of old men with dogs living in cars. One of them targeted you; he tries to chat you up. He's found some old woman to let him squeeze his vintage Volkswagen behind an old car in her driveway and God knows what else. He's an element of the scene on West Cliff Drive. Slight and fit, his hair long and white, first impression is a hip Zen old woman, but once I caught the hard look in his eye.

Your neighbor on your left is the cat hoarder whose 50 moaning cats in cages in the backyard just feet away from your kitchen and dining room drove down the property value on your house, so you could buy it and then, bit by bit, over the years, the humane society got activated by complaints, finally taking all the cats, and now she's had a stroke; on the other side, unbeknownst to you, the old woman died slowly in there while her niece held her prisoner, cashing her social security checks after she died, and then the place sat empty because of the strange layout, like a house full of closets, the living room reduced to a corridor, and everything painted purples blacks and yellows, dark and demonic. Finally, it was bought for *only* $700,000 by a family with only enough money or energy or will to slowly fix up the inside but not the junk in the yard or the decrepit garage propped up with boards of different colors and stones. Across

the street, the anti-leaf-blower yard is full of threatening and inspirational signs aimed at the others on the street to stop letting their yard workers use leaf-blowers and join the opposition. As far as you're concerned, they're a cult whispering in clusters on the sidewalk, eyeing you, holding themed block parties to draw converts. You'd like to put up a sign against signs but then you'd be caught in it.

After decades of walking in a neighborhood, things get pulled down into lines like an artist's rough sketch. They call the Steamers Light House café the bathroom café because its building was for public restrooms and they're still there. They giggle and fret about getting great coffee next door at the anti-abortion church where St. Francis holds a fetus in his hand. On West Cliff, the Sea Lions fish with the pelicans in the kelp forest so close to shore. Schools of near naked high school girls come up the cliff from the water saying it's beautiful and down below a pile of young men now gather in the same small cove. A woman brings her dogs over to us to pet because we're sitting on a bench.

On the way back, you run into a neighbor you *do* talk to. He asks about your folding bike; his had thinner tires so he exchanged it for a non-foldable but now they've improved the foldables and he wants to exchange it back. His dog Molly disappears into your backyard because you just left the gate open for a minute to get the trash out and he's calling her hard. "Uh oh. At least she pooped." Someone stole one of his 15 heritage tomatoes but he doesn't really mind, it's food. You let him know you're the one who left them a bottle of wine because he drops off tomatoes and his first ear of corn on your stoop. You let him know you love heritage tomatoes, so he comes back with the one that's ripe before someone else takes it.

Singularities

Expressivities experiment in the imperatives of continuous differing. Something stands up on its own, an element, or a node, already its own dynamic infra-world in the vortex of a capacity or a cleaving.

> A poetics is the expression of a form that "hangs together" (like bats!), a creation that has been *instaured* and doesn't unravel with time. Judgements about "what matters" are made—they have to be made—but they are less important than making connections . . . with such craft that the ideas fly out on strong wings on the haphazard breeze, to roost in trees, shitting inadvertently on shitty ideas . . . before echolocating once again, making sense once again.
>
> *(Muecke, 2020, p. 273)*

The tendencies of a daily walk in the woods become otherwise when a voice gets loud in the near distance. The contact aesthetic of swimming in a big cold lake rimmed with mountains shifts when the water surface is suddenly entirely coated with insects in a nymph phase. A groundhog knows to freeze for a long moment at the threshold of a field before making the dash to the safety of its place under the porch of a building at the far edge. The fundaments of racism show up in a scene at a hairdresser's.

In a present that is not contemporaneous with itself, the real and the unreal are absorbed together in rhythms and sensations. Affects are environmental, permeable, distributed. Politics is not just in the air but of the air; "A voice takes up the vibrant currents of the air and sends its intonations into them" (Lingis, 2018, p. 44).

A day

This morning we start out at the farmer's market for bagels and cream cheese infused with salmon. Double-almond croissants the size of fat baguettes ooze with butter under big bright bunches of flowers. Specialty black grapes are ripe only this week each year. People in lines modulate themselves; there is talk of retirement from a bureaucracy of brains. Lives properly scored with tastes, pleasures, an apt description.

We drive up the coast to Wilder Ranch, walking the edges of the artichoke fields to the cliff, sea lions below on the rocks, the occasional exchange of directions with tourists; we dodge a big confident group of people with kids headed for the beach. A man with a hard-earned air of field boss rides the long end of the rows on an electric flatbed; we can see two small clumps of pickers embedded in the plants.

Davenport, up the road, has the great breakfast place with walls of French doors, a fantasy scene of peace and perfect sunlight.

The burn lines from the big fire two years ago still blacken the hills all the way down to the ocean.

Walking in to the marsh in Pescadero, I try not to look at a dead bunny skin, already dried but still too close to tendons and bone. There are Egrets, Great Blue Herons, and song birds perched in the Silky Thread Grass and Northern Sea Oats. The main street in town is goldrush era. Silicon Valley bicyclists hang at Downtown Local, Pie Ranch, Duarte's Tavern, Harley Farms Goat Dairy, and Arcangeli Grocery Co. with its artichoke bread and locally grown olallieberries—a bright red cross between a blackberry and a dewberry. Topia Antiques displays its vintage goods, pottery, and potted plants in an old white house on a little dirt side street. At Slow Coast, a piece of sea glass that was 30 dollars two years ago is now 300 dollars. And on the outskirts of town, on a dusty hill past Pescadero Creek Inn and The Pescadero Flowery, Mount Hope Cemetery's dry dirt Catholicism is dotted with arbitrary clumps of incongruously big, pink flowers. Naked Ladies, also, but not colloquially, known as Belladonna Lily, Resurrection Lily, Magic Lily, or Surprise Lily.

There is no safe drinking water in town and 28% of the population is below the poverty line. We hear stories of burned houses and businesses. The masonic lodge is a Portuguese Catholic society of the Divine Holy Spirit. The houses tend to be painted white in a tradition attributed, variously, to the recovery of a large quantity of white paint from the 1853 wreck of the clipper ship Carrier Pigeon at Pigeon Point or the 1896 wreck of the steamer Columbia.

Back home, there is the great olive oil brought back from Spain, all the books, photos of bears and whales' tails, and a painting of a farm on a hill on the coast, gentle rows of plants filling in an opening surrounded by bushes and trees and the steep roof of a house.

At Arana Gulch the next day, the cows graze the endangered Santa Cruz tarplant in a coastal prairie grassland. They run after two old ladies with wide brimmed straw hats, one white, one red, who have crossed through the wooden fence to toss food from plastic bags. The tarplant's yellow daisy-like flowers are drought-tolerant due, in part, to the resins that coat its leaves and stick to the cows' eyelashes like mascara.

We'll go to the pier to see the sea lions lolling on the beams below, occasionally rolling off into the water or launching up for a landing. It's laborious, lazy, contentious, snuggly, noisy.

On West Cliff, for a long while, we watch a woman/man who has climbed down the bank to a cliff with a cave, and put down maybe a candle or a cell phone to film themselves dancing close to the cliff, hair long, curly, white, dressed in loose and cropped white linen.

A driver who doesn't want to stop to let us cross the street spits some nastiness out the window as he passes.

Donna and Rustin's garden is thick with basil and chard. They put strings of lights around the dogs' necks for their night forays into the back yard. So they can see them catching rats, keep them from bringing the dead rats in, find the bodies to bury. That dog doesn't like to be petted; they both jump up; they get a lot of treats.

Overflow

Thought is not just a sure-cut shortcut out of a muddled milieu but an improv animated in a perturbed expanse (Cohen, 2011). It overflows in an intimacy of substance, flesh, trope, and tone, like the flowering hibiscus chaotically in-filling ditches along the road in the Mississippi delta. When Nietzsche and then Foucault turned their attention to the intimate relations between knowledge and power, the object of analysis shifted to forms emergent in the conduct of life. In such a line of thought, the subject is an exposure that doesn't return to itself (Nancy, 2007, p. 1) but amplifies, falters, and reaches. Worlds and words whirl around in the continuous composition and decomp of what bloats and skids. *There is an* over-closeness of dwellings, dispositions, and atmospheres. A too-muchness that needs slowing and rest.

Andrea Ballestero calls for the new descriptive economy of an elemental choreography of condensations, shape-shifting, and seepage (2020). Erin Manning trains in immanent proprioception of minor multiplicities (2020). Here, I write recursively in a reverb that underscores something Annie Dillard or Joan Didion wrote or what some guy I overheard on the street did with words, with Bob Dylan or Fred Moten's soundings, with Alexis Paula Gumbs's frank cozying up to the skin and hair of sea mammals (2020), with fans waiting in line to take a selfie with Tanya Harding, or the way minks stretch their necks high to check out the dog and I.

Driving cross-country

Visits with old friends, and the friends themselves, and their places now, and what we talked about, showed up as elemental lines of a life in relief captured in the fugitivities of a gesture or a favorite meal. Joey's house was elemental with rocks and birds and flowers and meadows and wind. Betsy and Herbert's new place is brick and solid and perched on a hill in town that overlooks a long ridge of mountain covered in green, and shifting cloud shadows, and every morning the foxfire of fog hangs in the air in floating shapes. Laura's eyes snappy smiles, her poetry tucked just below the surface of a chin.

The road itself was starlings and bugs, fields of soybeans and cotton, tall grasses along edges, McDonald's and Starbucks and Dunkin'. Surfaces passing fast held the promise of a stop or a stay. Virtualities touched down like asphalted sediments in a mess of tactile compositions: the family vacation, the whiteness, the open road, the military, the road trip, the accident, local color, off the beaten track, desperate flight, life on the street, public projects and state neglect, the death toll, the world's largest cherry pie, a giant raisin box, hot rods and low-riders, the Sunday drive. Human bodies, animal bodies, machine bodies, bodies of thought, the constant hum of the ad, the Martin Luther King Boulevards, the cabins and motels, cows and pancakes, and Kachinas and stars and a cowboy hat.

We were listening to *Finnegan's Wake*, language twisting off in a dense overfill of lists, dialects, and forms. The precise iterations of words slid off an edge or sidled up to dissolutions,

some collective aesthetic fugue, some creaturely crawls, and dreamy apparitions in the materializations of objects and sounds. Words deployed not as an identity expressed but as an expressivity identified with when body parts act up and language as a medium breaks off from grammar or reference to become an economy of hieroglyphics and aural imprints.

> Here . . . she comes, a peacefugle, a parody's bird, a peri potmother, a pringlpik in the ilandiskippy . . . and all spoiled goods go into her nabsack: curtages and rattlin buttins, nappy pattees and flasks of all nations, clavicures and scampulars, maps, keys and woodpiles of haypennies and moonled brooches with bloodstained breek in em . . . and midgers and maggets . . . and the last sigh that come fro the hart . . . With Kiss. Kiss Criss. Cross Criss. Kiss Cross. Undo lives' end. Slain.
>
> *(pp. 11–12)*

In Tennessee, there's a long news story on Fox about why lightning is so dangerous if you're standing in a pool or resting your hand on a chain link fence. The woman who works the hotel breakfast—heating trays full of prefab cheese omelettes, sausages and gravy, waffles, cereals and oatmeal packs, yoghurt and hard-boiled eggs in the little fridge—leans against the back of a couch listening as if something might be happening. She had told me that the hot water for tea was in the Culligan and I had looked at her like she was speaking a foreign language, and then watched her mouth, willing her eyes to glance in the direction of what might be called "the Culligan."

West Virginia

We came to the Coal Mining Wars Museum in Matewan, West Virginia. It's been moved into the beautiful old bank building the miner's union bought for next to nothing. A big woman with bright blue eye shadow and diamonds on her cheek bones sits at a folding table in front of the huge, gold-plated open vault. She gestures at us to turn the corner into the mine wars where there were marches of 10,000 miners and Mother Jones moved between the camps giving speeches, and the government dropped bombs on them and the miners wore socialist red bandannas kicking off one of the meanings of "red necks."

Matewan has a 20-foot red brick wall around it built after floods buried the town under 20 feet of water. There is one beautiful little arched door in the middle of the wall. Just beyond, there have been deadly floods in Kentucky. I'm reading a Breece Pancake story to Joey as he drives around road blocks. A young man's friend casually kills a companion beagle with a quick slice from a scythe as they walk through the woods. Sometime later, we don't know how soon, the young man crashes his truck with a sudden sharp pull of the wheel, leaving his dog-murdering friend brain damaged and in a wheelchair for the rest of his life. The story hangs out in the man's return after 20 years of exile, for an unannounced visit which becomes an unwelcome half-night stay in the life that goes on living with the scratchy blanket on the bed of his old room and the notes and photos and what's said and not said and the eyes and some guns and knives when the parents bring the victim over (Pancake, 2020).

When I lived in the ruins of the coal camps, body parts and truck parts did their own thing. That one's son drank himself to death in Chicago, a daughter is nervous; she tingles. Ms. Blevins, who had 13 kids, says her uterus hang down from her body; when I called her to ask about getting some firewood, she answered the phone already deep into a speed

monologue on planting by the signs and something about a dress. Bodies made restless, maimed, and capable were alert to the irreducibility of what was coming.

A life became describable through abrasions. Sam Tanks's son beat him up bad, Elanda Hamlet was almost raped by William Street, someone broke into Della Mae's and stole 50 dollars, pickled eggs, and pinto beans, someone pulled the wire on the water pump in Rhodell, Zackie Shrewsbury spent the day in court in Welch. Charlie's house burned. Ronnie Alexander died of pills and liquor. A daughter died of diphtheria. That one cut off a toe to get workman's comp, and then later, another toe. During the last strike, people lost houses, cars, furniture; this one, they said, will be easier because they'll have tax returns.

People ran their mouths as if they were the metronomes of the world. When you ran into people, you heard things. Ray moved in with Tracey to get away from his brothers' drinking and fighting even though everyone said he was the worst. When Bobby went by to see about his truck, Ray and his sons had hundreds of parts spread out all over the dirt and they were screaming at each other. But by the afternoon, the truck ran perfectly.

Sociality was a conjuring. A transient collective showed up in the repetitive animation of talk, tinkering, and ways of being touched. People were struck by things. Connections were hallucinated. History in the present was not a flat determinant with clear margins but an intensity so sensate it pushed beyond the sensible in a speculative map of patches restoring the "active base matter" (Bataille, 2001, p. 113) of places and things.

People were standoffish about naming and judgment unless it was biblical or otherwise coming from an elsewhere.

There was a blessing in the gaggle of flesh and soundings in the community churches or in the wild of woods and drugs.

The unthinkable or inescapable materialized and decomposed in a fusion of "the used to" and "the anymore."

The price of gas determined whether you could afford to take a job at Hardees an hour away over the mountain.

The state of the roads measured the distance from the center of America.

Mississippi

There's music at the Shack Up Inn in Clarksdale. We're family, black musicians, old white visitors to the Delta Blues. "Everyone, stand up and tell us where you're from." They yell "Damn Yankees" when I say we're from New York and I feel the pull of the south's homing in on getting something started in loud mouths, old cars, Jesus, and firecracker stores. When we get up to get up to go later, it can't go unannounced. "Are you leaving?" An old white man sitting with his wife smirks at me as I pass, "Be good. Don't get into any trouble." When I touch his shoulder, he perks way up; I look to his wife to include her and she smiles an excited imaginary grin.

Every black person we see in Clarksdale is masked; we never saw a white person wearing a mask.

We're referred to an Italian restaurant because Joey is a Russo. It's out on the far side of the white part of town which we didn't even know was there. Old white couples arrive at exactly six o'clock, some gathered into groups of old friends, for a night out. The place is a festive formality; the outfits feel like the 50s. The building is just a small step up from the cinder block stores in town; there are gestures at warm decorations—a shelf of random Christmas village parts and vases with dusty flowers, some knick-knacks on another shelf.

The food is good, mostly homemade Italian but also frog legs. The owner is a white woman in her 70s or 80s who handles the bills, phone orders, cooks, and wait staff from the register by the front door.

> Hey Fred, how ya doin, well if you want to come in now I can seat you in the back but it might be a while if you don't mind waiting because we're two short. No, you just come on and I'll take care of you.

Her forehead and cheeks are badly bruised as if she took a hard fall on her face.

Oxford

The square, flanked on one side by Ole Miss, is a bustling old-time south fantasy enlivened by money and Faulkner's Yoknapatawpha County. White bodies in outfits move in and out of Square Books, Proud Larry's, Cat Daddy's, Brydhouse Organic Café, Buff City Soap, Insomnia Cookies, and boutiques—Cicada, Dsquared, Lulu's, and Misbehavin. At the Ajax diner, I recognize what I had thought was a Texas funky aesthetic of old wooden window frames repainted as art, a wall of license plates, pressed tin lampshades, tables and trash cans, okra, fried green tomatoes, southern fried catfish, chicken and dumplings, and turnip greens.

As we were driving out, along tree-lined streets of beautiful old house, I looked at Zillow to extend the fantasy.

Beach

Coming in to Holden Beach, North Carolina, you drive through flatlands past country churches, farm stands, crab shacks, all the kinds of dollar stores, a bookstore, lonely looking ranch houses on flat acre plots. Then the road rises up the high bridge over the intracoastal waterway and at the top the ocean suddenly appears in a supersaturation of bright light and color. Formations of pelicans fly close to the surface.

A beach is a tactile composition. Energies activate in the colors of umbrellas and sea kayaks for rent, the sight of shrimp boats coming in, or forms of art from Crazy Mary's windows painted with mermaids and sea creatures to the fanciful names on rustic signs tacked onto every cottage. Thought overextends itself, turning corporeal, buoyant, binding sensuousness to sense in a "second nature in which objects and landscapes . . . acquire radically intensified meaning as the physical melts into virtual reality" (Taussig, 2000, p. 257) in the poesis of water and sand.

The concept of a sea turtle breeding ground activates a self-sensing world in the contours of inter-corporeal intensities (Orlie, 2010). More a mode than a symbol, it is a field of elements gathering with a charge. It elaborates across elements with their own pulse, stretching across pools, yoga, afternoon thunderstorms, hurricane season, beach music, peaches, beach access, taffy, and flotation devices. Its events are the events of waves, rocks, seaweed, and habits of walking and looking. It's a project. Little squares of red cloth cover porch lights, volunteers patrol looking for moon-crawls, unattended beach equipment is removed, balloons are prohibited, holes in the sand have to be filled, turtles are taken to rehab, a weekly educational program at the Town Hall mixes natural science with turtle t-shirts, jewelry, flipflops, and boogie boards. There are metrics and coolers to transport eggs, and freaks of nature. There are sharp eyes and factoids and tones of voice.

Sea turtle air is the ecstatic naturalism of the turtles' extreme size and age and the wild mystery of the magnetic maps and compasses loggerhead females use to sense their way back to their own hatching grounds to lay their eggs after decades of minute-by-minute micro-maneuvering in distant oceans. Against the backdrop of environmental collapse and colonial logics of dissociation, dislocation, denial, and universality, sea turtles are an apparition of wild localism in the precarious precision of a life's capacities. Self-selecting humans find the focus by reattuning to tiny signs in pragmatic responses. The nests may be dangerously placed near a walkway or where threatened by high tides on the barrier island's receding shoreline. Volunteers rebury the 100+ eggs, measuring the exact depth of the mother's fin and re-placing each egg in exactly the same order. Then they fence the nest, monitor it for 60 days, and dig shallow trenches to the sea just before the boil. There are dramas and freaks of nature—5-inch, elongated eggs with five yolks each, eggs whose shells are black and hard as nails—and there are slow rhythms and long gazes. In the end, only 1 in every 10,000 hatchlings reaches the open ocean of the North Atlantic gyre through a clumsy gauntlet of ghost crab claws, foxes, bird beaks, the predatory fish of the coastal shallows, boat propellers, fishing gear, trawling, ghost nets, longlines with thousands of baited hooks extending miles across the ocean, microplastic, debris, trash, and pollution. Sand temperature determines sea turtle sex; global warming has left them all female. Clumps of floating seaweed in the watery waves are the safety zone for years of gaining mass and hardening shells in a porous ontology crowd of elements touching (Han, 2021).

On Plum Island in Massachusetts, the concept is Greenhead horse flies even though two thirds of the island is devoted to the Parker River National Wildlife Refuge—a major national research site for undisturbed beach and marsh habitats and the effects of mercury and other pollutants on them. The refuge supports 300 species of birds—Redwing Blackbirds, Killdeer, Egrets, Gulls, Marsh Hawks, Great Blue Herons, Snowy Owls, Osprey, Piping Plover, Least Tern. Its miles of beaches, accessible only by a partially paved road or in some places only by foot, are closed from April 1 through mid-August to protect Plover and Tern nests. Volunteers are stationed on the beach at the boundary of the refuge to turn pedestrians back. Invasive plant species are pulled up, one plant at a time, to conserve the landscape biodiversity of Perennial Pepperweed, Purple Loosestrife, Brush Honeysuckle, Phragmites, and Oriental Bittersweet across the microclimates of the salt pannes, shrublands, and extensive boardwalks nestled into the dunes. Three man-made marsh impoundments are managed to provide optimal habitats for migratory birds and river otters. Swift tidal currents make boating and swimming extremely hazardous. The arctic Labrador current flows from north to south along the shore, migrating sand into the mouth of the Merrimack River and chilling the coastal waters to deep navy blue and black hues. The shallow beach shelf extends some distance out to sea, producing deadly undertows and riptides, shipwrecks, and drownings. Resident clammers and local businesses show hyper-vernacular attitude, a submersion in place, in a dress code of tattered cottons and big-mouthed, tongue-in-cheek names like The BeachComa, Plum Crazy, Mad Martha's, and Bob Lobsta.

A Plum Island Greenhead fly problem was engineered with the marsh impoundments that provide fly mating grounds and rich larvae habitat. The female lays her first egg mass of hundreds of eggs within a day of mating but to lay additional masses she needs a blood meal and, unlike mosquitoes, which insert a delicate, needle-like proboscis through the skin to draw blood, the Greenhead tears a chunk of flesh with her jaws and laps at the blood. Greenheads bite aggressively and can fly at 50 miles an hour in a range as wide as 30 miles, attacking the soft flesh of exposed limbs sensed through dark colors and the scents of hair

products, perfumes, sweat, and saltwater. They easily follow humans through open doors or fly in through windows. Peak Greenhead season is the tourist month of July when the island sports hand-painted warning signs of human skeletons covered in flies and the talk hard-wires to the threat of the flies, the eyes grow alert.

The fly population flourished to such a point that research scientists invented and installed large black boxes on stilts all over the marsh like a modernist art installation. The box trap design was cheap and simple to make but precise. Painted a glossy black to draw the flies and absorb heat from the sun, the boxes are 15′ 32 inches on each side, with a metal insect screen on top and an open bottom. They sit on 40-inch legs attached to stakes in the ground so that the trap sits exactly 24 inches above the ground surface, where the Greenheads fly. The flies enter the trap from below and are funneled, through cones cemented into holes cut into the sides of the trap, into two collectors made out of clear plastic containers such as a cake box. A decoy, such as a 14-inch beach ball painted shiny black, is suspended beneath the trap clearing the ground by 4–6 inches, so it moves with the breeze. Vegetation beneath and around the trap is kept low. Clusters of two or three traps in a fly path capture exponentially more flies, collecting over a thousand flies an hour. The design circulated widely. The flies on the island were virtually eliminated for a year or two but then there was talk of their mysterious return.

In Long Island sound, the concept is microscopic jellyfish.

Concepts built out of beaches are a radical specificity, a field, a project, a condensation, a virtual materiality.

Expressivities experiment

Living in and through things is an elaboration in a milieu—a swell, an extension, a fabulation that reattunes to thresholds of difference and repetition. Multiplicities stand together for a time in a spectral exchange (Starosielski, 2021). Beings experiment with what's at hand, look for contact in forces distributed across matters and immanent energies. Human eyes and ears are pulled into a vortex or averted in a bid for peace, a restart, a vacating, a drift, a focus. What becomes palpable is a question. Fabrications resingularize the materials of living (Engelmann & McCormack, 2018, p. 253). A self-sensing world activates in the contours of inter-corporeal intensities.

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16

SENSUOUS ETHNOGRAPHIES OF RUNNING

Comparing running with walking

Jonas Larsen

Imagine a fictional scene. The street is slowly waking from its drowsy morning state, with car drivers, passengers, cyclists, and pedestrians moving in concert. While inhabiting the same space, these different mobile bodies sense their movement and the street differently. The car driver and passenger are largely oblivious to the weather in the air-conditioned car, absorbed by the radio and traffic ahead. The cyclist is troubled by the morning headwind and heavy traffic. The man who walks his dog enjoys the sun, quiet pace, and scenery as he walks on the pavement where odors of coffee and flowers occasionally overpower the traffic: "Excuse me, can I get through," says a heavy breathing, sweaty runner with a clenched face, interrupting the walker's train of thought. The walker says to himself, "Why people bother with all this taxing running is beyond me—my body for sure does not agree with running." The runner is tired, with heavy legs, and is just relieved that today's training session will soon be over and that she will be well prepared for the upcoming marathon in her city. A smile appears on her face when she realizes that in two weeks, this street will finally belong to her and her fellow runners and that she will be carried onward by the cheering and festive atmosphere.

Drawing on and contributing to the growing literature on the senses of running (Allen-Collinson et al., 2021; Allen-Collinson & Owton, 2015; Hockey, 2006, 2013), this chapter explores the sensuous geographies of urban running. In part, I discuss the uniqueness of running with respect to its sensuous nature by comparing it with walking. The first part establishes my take on what a sensuous ethnographic account of running must entail. The second part highlights the sensuous features and differences between walking and running as embodied, emplaced practices. The third part establishes some of the unique sensuous geographies of urban running—in the ground and air, and weather worlds, in environments charged with certain atmospheric qualities, and social relations. I conclude by extending my sensuous approach to all sensory ethnographies concerned with bodily movement.

Toward a sensuous ethnography of running

What would a sensuous ethnographic approach to running look like? I think that it must cover the following features. First, it should describe and theorize running as a unique sensuous practice and runners as (potentially) what Lorimer has termed "accomplished sensualists"

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(Lorimer, 2012). It needs to account for how running compares with but also differs from walking and cycling, for instance, and how multi-sensoriality is integral to running and the lived lives of serious runners, wannabe runners, reluctant runners, and those who fail to become or continue to be runners. This account needs to explore how runners learn to attend to and decipher their bodies through their senses—mediated by various cultural discourses, circulated in words and texts.

Second, this portrait of running must account for the cultural construction of the senses in running, especially how running feels as embodied emplaced practice. This implies an embodied sociology of the lived, moving body (Allen-Collinson & Hockey, 2011). Such an approach involves corporeal ethnography (Wacquant, 2004) or non-representational ethnography (Vannini, 2015; Larsen, 2019) and must attend to how, for instance, training programs and trainers instruct how running ought to feel. They teach people to listen to their bodies as well as the bodily sensations of running (e.g., ragged breathing, acid in the legs, thirst), slow or fast, short or long distances. Diverse forms of running feel differently and produce unique sensuous sensations. Moreover, how runners sense their bodies largely depends upon the state of their body—running with the lean and fit body of one who regularly runs is different from running with a heavy and unfit body of one who is new to running or has been injured.

Third, while the classical external senses (especially sight, hearing, and touch) matter to runners, the sensuous in running studies clearly extends beyond cutaneous contact with surfaces, slopes, landscapes, and weather worlds. In addition to external senses that respond to stimuli coming from outside of the body, running activates internal (interoceptors) senses such as those that allow the body to sense movement, action, and location (kinesthesia or proprioception), balance (equilibrioception), pain (nociception), and body temperature (thermoception). Here, the stimuli come from inside the runners' organs and tissues and may lead to signals such as abnormal breathing or thirst. More broadly, as the senses do not work in isolation, accounts must stress the multi-sensuous nature of running and the blurring of perceptual modes, including how the internal and external senses occasionally overlap, blur, and interact (Allen-Collinson & Owton, 2015; Allen-Collinson & Jackman, 2022, p. 334; Paterson, 2009).

Fourth, and related, running is an "emplaced" practice (Pink, 2011): it always takes place somewhere and at a particular moment, and this "where" and "when" influences how running feels. Runners feel the ground, share streets with others, and run in different weather conditions (Larsen & Jensen, 2021). The runner's body is sensitive to seasonal weather worlds (Ingold, 2010). Seasonal weather alters the environment in which people run (for instance, rain and snow make the streets slippery) and touches the runner with different elements and sensations that again might impact their ability to run (the only way to hide from this "weatherly unpredictability" is to run a treadmill in a training center) (Hitchings & Latham, 2016). An analytical task is to examine the sensuous work involved in coping with running (or failing) in different environments and weather conditions. Theoretically, this requires understanding the nexus between "mind–body–and–environment" (Pink, 2011).

Fifth, runners—like all other mobile subjects—also sense places in both instrumental and aesthetic ways, in particular through the senses of seeing and hearing. Sensuous running ethnographies must explore the unique ways that (different) runners sensuously appreciate and explore places in which they are running. However, sensuous runners' perceptions sense partly depend on how they run and their bodies fare. For instance, if they are tired or racing hard, they will most likely be sensuously attuned to the body's rhythms and the environment as a taskscape

(to use Inglold's term). When out for a gentle jog, it is easier to be sensuously absorbed in and attentive to the sights and sounds of the locations passed by (Larsen, 2022).

Sixth, sensuous ethnography is as much about the senses as it is *through* them (Pink, 2015; Sparkes, 2017; Stoller, 2010; Vannini, 2019). Researchers are encouraged to train their sensuous skills and develop "sensory intelligence," which is "the ability to utilize one's senses as skills to manipulate and adapt to one's environment. It is the combined emotional, visceral, and cognitive ability to engage in somatic work" (Vannini et al., 2013, p. 67). It further requires a reawakened scholarly body that "yearns to exercise its muscles" (Stoller, 2010, pp. xi–xii) and perform a mobile and lively ethnography of action (Vannini, 2019, p. 48). In terms of running, I have argued (2019, 2022) that the researcher ought to become a "highly accomplished sensualist runner" (Lorimer, 2012). The researcher's body should not just read, think, and write about running, but also get to know running, and indeed runners, by running with them.

Finally, sensuous ethnographers often write about sensuous life in moving, lively, and empathetic ways; they are wary of killing the sensuous richness and rawness of everyday life and events with a dull, dispassionate, and overly analytical prose that prevails in academia. Without abounding analytical and theoretical resonance (as with some performance and autoethnographic writing), sensuous running ethnographies should develop "somatic layered accounts" (Vannini, 2019) that are theory-informed, but which never flatten the sensuous richness of running (Larsen, 2022). In the remaining part of this chapter, I discuss some of the features of sensuous ethnographies of running, starting with how running and walking fair as corporal foot practices.

Common features

Walking and running are foundational natural forms of human movement or gait; being able to walk and run is an integral part of being an able-bodied human. Both walking and running are bodily forms of movement that involve putting one foot in front of the other at a speed that covers some geographical distance. Putting one foot in front of the other is closely linked to humans' biological and psychological capacities and rhythms, with walking and running requiring some synchronization of one's breathing, heartbeat, and bodily well-being more broadly (Middleton, 2021; Wunderlich, 2008). Walking and running can be distinguished by the fact that running allows higher speed and that the runner's feet occasionally "fly," while the walker always has one foot on the ground. However, while intermittently off the ground, contact with the ground feels harder on the feet, limbs, and legs when running, especially when running on asphalt or cobblestones or without shock-absorbing running shoes. Running is a high-impact movement and each collision with the ground vibrates through the lower body. For instance, running in patent leather shoes is very unpleasant; they are designed for walking (short distances) on very smooth surfaces. Walking is in comparison softer on the feet and legs, and urban walking does not require specialized shoes (although the wearing of trainers is common).

Although it is possible to go slow or fast, walking is known for its steady and slow pace (approximately 5 km/h), which can be maintained over relatively long distances in not-too-taxing environments by most able-bodied people. However, walking much faster is difficult. Indeed, when walkers run late, they might run short bursts to arrive on time. Here, running is a form of sped-up walking. The temporal variations are much greater when it comes to

running; at the lower end, we have jogging that might not be much faster than walking (6–8 km/h) and at the fast end, sprinting (15–25 km/h).

When walking, one's body is often, what Leder (1990) calls, "absent"—in the background, unnoticed. Walking normally feels easy on the body and is easy for most people. Walking is typically conducted with a low pulse, and many people can walk for a couple of hours before they get tired—in part because small impromptu stops are integral to the staccato rhythms of walking (on rhythms of walking, see Edensor, 2010; Wunderlich, 2008). Pedestrians seldom sweat or feel troubled. There is a *lightness* in much urban walking, at least for healthy and able-bodied people. Many walks are extremely short and integrated into other modes of travel, such as walking to a car or home from the metro. Living in a house or working in an office presupposes walking to the toilet, kitchen, meeting room, canteen, or countless other places. People only run in such places if they are late for something or busy. Walking is central and necessary to how able-bodied people move about as part of their everyday lives, whereas running is not.

Compared with walking, running is sensuously complex and demanding. Not only is each landing more callous, but the breathing is also harder, and the pulse is higher; getting into a decent rhythm at the beginning of a run is tough with the body needing to warm up—the mind and body need to accept the task at hand (Allen-Collinson & Owton, 2015). Running is more taxing on the body, and an unfit person will quickly run out of steam—gasping for air, being unable to talk, and experiencing heavy legs. Specialized shoes and clothing are common, and runners take a shower afterwards, having become sweaty. In contrast, walkers (except for hikers) wear their everyday clothes and normally shower before they go out. Indeed, people "go out" to a restaurant or the pub; they do not run there. Walking is a form of transport but running is not. Running is hard linear work that produces sensuous excesses and is taxing on the body. This also explains why walk-and-talk and not run-and-talk sessions are common at staff seminars, among other instances. Many are not fit enough to talk when they run or even run in the first place. Walking is a different matter.

Except for air-conditioned training centers and shopping centers, urban running and walking take place in and are conditioned by the "weather world" and are affected by air pollution. There are other overlaps: they share pavements and paths in parks. They move on the same terrain and need to coexist and adapt to each other despite their different rhythms and paces. Given that pedestrians generally outnumber runners on pavements, and pavements are designed for walking and stationary public life, runners are often poorly attuned with the slow and erratic rhythms of walking. Indeed, runners might often feel out of place on pavements (Cook et al., 2016; Gimlin, 2010; Larsen, 2022).

Finally, running and walking are now associated with exercise and physical and mental health and are endorsed by doctors and urban planners alike. Active mobility is seen as a necessary remedy to living an otherwise sedentary modern life (Latham, 2015). However, walking and running are also associated with different types of discourse. In the Western world, running is not conceived as transport as walking is (but see Cook, 2021, for an account of the niche culture of run commuting), while walking is not associated with sport (the exception being the extremely minor discipline of race walking). Some running cultures are tied to the world of sports and running events, where time and records matter greatly (Bale, 2004; Larsen, 2022).

This connection to sport highlights another difference between walking and running. While we are all everyday walkers, a few of us are runners. Had it not been for "modern time scheduling" (Simmel, 2012) where punctuality matters, few would sprint to reach their train

or meet on time. Running is a leisure activity that people might choose for countless reasons and undertake in many ways. Running is not a uniform practice (Cook & Larsen, 2022). Some of these reasons and practices are discussed next, where I dissect ethnographies where the sensuous nature of running comes to the forefront.

Sensuous running cultures

Sensing grounds

Various ethnographies describe how runners sense the environments in which they operate. Geographers, being scholars of place and space, have explored how surfaces and slopes mediate and constitute an important dimension of running, with runners haptically sensing the grounds on which they run (Brown, 2017; Edensor et al., 2018; Howe & Morris, 2009; Lorimer, 2012). Lorimer examines runners' "passionate encounters" with the multiple textured surfaces that facilitate movement on and above the ground. He argues that runners use "feet and legs as sensory devices" and consider the "long-distance runner as a highly accomplished sensualist, as someone who comes to know the variety of the world according to the feeling of differently textured terrains—bare rock, sand, soil, concrete—and the kinds of ecology that grow through them" (2012, p. 83). This definition of the world underfoot (Ingold, 2004), for instance, materializes when runners run on steep hills, or when rain or snow makes paths slippery.

Some forms of running valorize these haptic sensations of "slopes and surfaces" and their seasonal changes. For instance, the skills and sensations of fell running and cross-country are linked to being immersed in and contacting the vagaries of terrain and weather, and being off-road (Allen-Collinson & Jackman, 2022; Lorimer, 2012; MacBride-Stewart, 2019; Nettleton, 2015). Navigating textured and porous terrains is technically demanding. It requires a developed sense of "terrestrial tactility" (Brown, 2017, p. 311), which is the ability to read surfaces with both feet and eyes and a strong, responsive body with a developed vestibular sense to maintain balance and flow and avoid injuries (such as twisted ankles) in demanding environments. Others have explored paved sensations under feet when running on streets. In *Urban Marathons*, I (Larsen, 2022) discuss how smooth, predictable asphalt on an even plane facilitates easy running and fast marathons. Many urban runners prefer to run on predictable tarmac (or even on air-conditioned treadmills, see Hitchings & Latham, 2016) than on sensuously rich and volatile paths and trails (Cook & Larsen, 2022).

Sensing the weather: running in the weather and air

Runners must deal with the visceral realities of seasonal weather worlds. Weather conditions can alter how surfaces feel, making them rock-hard, muddy, or slippery. However, the weather also mediates running in many other ways. People "run in the weather" (Larsen & Jensen, 2021), and the weather also mediates the "vertical worlds" of running; on the move, runners sense and are indeed affected by the air quality, temperatures, and how sunny it is.

The weather affects people's motivations to be outdoors, and bad weather can easily put off people from running that day—being too hot, cold, or wet for reluctant runners. More experienced and serious runners know how to deal with snow, rain, and extreme heat and rhythmically tune the intensity to the weather conditions at hand (Larsen & Jensen, 2021). They know how surfaces react to snow, rain, and droughts. Through the sense of

thermoception, they have a sense of how cold, crisp, humid days with no wind, or warm days with a burning sun, touch their skin and enter their bodies through the air that they inhale. The "air–body intermingling" illustrates how external elemental forms such as air both touch and enter bodies, and negatively affect their capacity to run in freezing weather, pollen-thick air, or air-polluted streets (Allen-Collinson & Jackman, 2022, p. 644); however, runners may not notice that they run on highly air-polluted streets (Hodgson & Hitchings, 2018). But air is not simply inhaled or felt. Wind, which is the horizontal motion of air, is a material force that makes it tougher (headwind) or easier (tailwind) to run. When racing, "clever" runners run behind others when faced with a strong headwind.

Finally, skilled runners know how to hydrate and dress for the weather, whereas inexperienced runners often run with too much clothing and risk overheating when their bodies begin to produce excess heat. Seasoned runners learn "weather work" and interpretation (Hockey & Allen-Collinson, 2019; Allen-Collinson et al., 2019) through running and socializing with other runners.

Sensing places

Runners are, of course, not only haptically sensing grounds and the weather; they also see and hear landscapes, buildings, people and animals, and increased (multi-sensuous) vision is central to running. For instance, runners use vision—supported by a sense of hearing—to navigate and scan the proximate environment and make improvisational adjustments: scanning pavements and streets, negotiating encounters with pedestrians and cyclists, and finding their way. Alternatively, in busy races, visual orientation is crucial for avoiding clashes with fellow runners (Allen-Collinson & Hockey, 2011; Cook et al., 2016; Hockey & Allen-Collinson, 2006).

However, vision is also tied to landscape appreciation and tourist gazing (Urry & Larsen, 2011). Much urban running—like leisurely walking—takes place in green spaces (Bamberg et al., 2018) because they are visually stimulating and not only because of the soft grounds and few obstacles, such as stop lights. Green spaces make the long run more visually stimulating and sonically calm than busy roads. I (Larsen, 2022) have demonstrated how urban marathons are designed as visual spectacles that include iconic tourist sights and exciting neighborhoods. Indeed, marathons attract tourist runners who enjoy running this daunting distance in exciting new places. However, those who race with a high pulse or run troubled by their body seldom have the energy or time to appreciate the scenery. This again demonstrates how runners who focus on their own body and internal sensing can be oblivious to the surrounding environment. How they sense external environments in part depends on how hard they push themselves while running: a fatigued body or one running at maximum speed often runs with tunnel vision (Larsen, 2022). Whereas Lorimer portrays the "accomplished sensualist" as attuned to the terrain and environment, runners might also block it out to fully concentrate on listening to their bodies and staying mentally focused. We may therefore say that "the accomplished sensualist runner" can tune in-and-out of the different sensuous inputs generated by running.

Hearing is another crucial aspect for runners. It often works with seeing, for instance, when runners listen to the proximate environment to detect situations or dangers that are outside their field of vision, such as loose dogs, cars, or when overtaking runners. Hearing is also associated with landscape aesthetics and sensations: hearing birds singing, raging waves, or trees rustling in the wind. Rather differently, shoes hitting the ground is a consistent

soundtrack to busy running events (Larsen, 2022). It is also used to assess how well bodies cope with the current pace. While the breathing of a body at rest (even while walking, for a reasonably fit body) is almost silent, it is loud and "shared" when the body is pushed to perform. A heavy-breathing body is often loud, with runners using this sensuous communication to compare their running to that of others (e.g., competitors) or to adjust their pace if they are running together (Allen-Collinson et al., 2021).

Hearing also matters because talk is central to social running. While races are normally muted events in terms of talking, runners chat a lot together during slower runs when their pulse is low and there is not much else to do. Many who run alone entertain themselves by listening to music and podcasts to distract themselves from the potential drudgery of running and boredom of one's own mind and thinking. Finally, sounds play a significant role in urban marathons where the atmospheric intensities are not just visual but also decidedly auditory—produced by loud bands, loudspeakers, and people clapping and screaming support (Larsen, 2022).

So far, I have mainly discussed runners' external senses and how they sense horizontal and vertical worlds and the bodies of others. While these senses matter greatly to runners, they are, to some extent, secondary to the internal senses. While runners can be oblivious to the external world, it is more difficult to escape their body and embodied mind (Allen-Collinson & Owton, 2015; Larsen, 2019; Vannini et al., 2013). The kinesthetic sense (otherwise known as proprioception) refers to the ability to be mobile and sense movement in organs and tissues, such as muscles, joints, and breathing. The intense embodiment of running generates "a heightened sense of corporeal 'aliveness,' sometimes pleasurable, sometimes less so, where pain and pleasure can interweave" (Allen-Collinson & Owton, 2015, p. 262). The required sensuous work here involves sensing and accessing, for instance, one's breathing and heartbeat. To objectify this assessment and not be fully reliant on their sensory organs, many runners use GPS watches and heart rate monitors to determine and adjust their speed (Larsen, 2019, p. 569). Kinesthesis is learnt through repetitive actions and variegated forms of running that gradually condition the body to run faster, longer, and more frequently. Through training, practitioners "learn to reframe muscular 'burn', stiffness, breathlessness, a pounding heart, and exhaustion as both immediate pleasures . . . and as signs of achievement and well-being" (Crossley, 2006, p. 40).

Thermoception (sensation and perception of temperature) and thermoregulation (bodily ability to regulate heat) are central to outdoor practices, such as running, where practitioners wear minimal clothing and quickly warm up once their bodies are in full swing. Being able to sense and regulate the heat of one's body is a crucial skill for the accomplished sensualist. While thermoception and thermoregulation are biological processes, they are subject to manipulation by runners' sensory work. For instance, runners know that the first couple of kilometers are hard and arrhythmic, as one's body is not yet ready for the task—that is, not warmed up. Muscles are stiff from the last run and the heartbeat is unstable (Allen-Collinson & Owton, 2015; Allen-Collinson et al., 2016). When the body is properly warmed up, there are "feelings of internal energy and bodily readiness" (Allen-Collinson & Owton, 2015, p. 256) and running feels much easier. Experienced runners also know that it is better to wear light clothing when racing and feel cold a little in the beginning than to be comfortably warm at this stage, as one's body will quickly warm up and produce excess heat once the race commences (Larsen, 2022). Once the body is warmed up, heat regulation becomes crucial, and runners may adjust their pace or time of running if faced with weather conditions where they risk, for instance, overheating. Therefore, people often perform lighter training sessions

or run for odd hours to avoid extreme weather when boiling hot. However, restraining oneself when participating in a race can be difficult and many runners struggle in the heat and experience eurythmic torture (Larsen, 2022).

This leads us to the sense of pain, which is an integral part of running, and the intense embodiment that is associated with this practice. Of course, runners are not always in pain, yet they will not become devotees if they do not learn to associate sensations of pain with desirable states. This includes feelings of being out of breath and having one's organs ripped out when doing intervals or "digging in" (Hockey & Allen-Collinson, 2015) at the later stages of a race where one's whole body is tired out and in pain. These pains are temporary and will only make the body stronger and fitter for the next challenge. That is if one avoids running into one of the many injuries that plague runners' experience. Running is difficult on the body, and minor transient aches and pains are part of the sensuous everyday life of habitual runners. Such pain normally disappears after a couple of days or during warm-up. However, runners are sometimes side-lined for longer spells with more long-lasting injuries in the feet, legs, hips, and gluteal regions that prevent them from running (normally), as the nociceptors send pain signals to the brain when people begin to run. Thus, injury is closely associated with a sense of pain and emotional despair. To minimize the risk of injury, it is essential to be able to assess muscles, joints, and bones and determine when they need restitution and not another testing run (McNarry et al., 2021).

The marathon's daunting distance is the embodiment of the mythical valorization of pain in running—of enduring pain and not falling a victim to it. Larsen (2022; Edensor & Larsen, 2018) discusses the somatic rhythms of running a marathon. They constitute "a drama of rhythms" for which runners have trained to maintain a constant pace and relatively stable heartbeat all the way to minimize the risk of running into the infamous marathon wall at the final stages, which will slow them down and make them suffer even more. For long stretches of runs, good-running runners who experience flow and harmony—or eurhythmia—might not even be aware of their (sensing) bodies. As discussed by Leder, a well-functioning body is "absent" and is not in consciousness. Later in the race, when maintaining the desired pace is brutal, bodies might start to "appear" (Leder, 1990), with people discovering if they have good or bad legs and their mind is readying to "dig in" (Hockey & Allen-Collinson, 2015). Various bodily disturbances may now trouble runners, and the senses of kinesthetic and pain easily dominate. At this stage,

> fewer are flying over the asphalt, and each landing gives painful sensations in the bones, legs and tendons. They are heavier and stiffer, with a painful burning sensation, while the feet are aching. The legs now quiver with each impact, absorbing the violence of each collision with the asphalt. . . . Running is less dynamic and graceful and has shorter strides. People are dizzy and confused; their pulse is increasing and irregular, they are tired and suffer from dehydration, low sugar levels (hypoglycemia) and overheating (hyperthermia), or perhaps from being cold (hypothermia) if they must walk now and then. People struggle to perform their finish-time calculations. Pain is etched on sweaty and tangled faces, with empty and dead eyes. People try to devour sports drinks or sugary gels to maintain normal blood glucose levels, but the sweet stuff is perhaps too sweet now.
>
> *(Larsen, 2022, p. 139)*

The rhythmic dramas of marathons have everything to do with their senses.

Concluding thoughts

This chapter has discussed running as an intense embodied practice that generates multiple sensory sensations. I started by arguing that a sensuous ethnographic approach to running must account for seven features. I end by reflecting on what the sensory ethnographies of running teach us about sensory ethnography in general and corporeal practices in particular. Indeed, my approach can be extended to other corporeal practices such as walking, cycling, yoga, and climbing, to mention but a few.

First, sensuous ethnographers must understand people as more or less "accomplished sensualists." Many runners are "accomplished sensualists" with considerable embodied knowledge of running. However, others are not. However, the point is that running teaches us that it is through training that such skills are acquired. The concepts of training and practicing must be central to sensuous ethnography. Second, it is essential to account for how this training is partly cultural; experts and best practice rules govern how people train their bodies and develop sensuous skills. Many people have the potential to become accomplished sensualists.

Third, sensuous ethnographers must work with a body that is simultaneously biological, material, and social (Vannini, 2015) and senses that are external (exteroception) and internal (interoception). A key to understanding running and other forms of human movement from a sensuous perspective is accounting for both the "internal" and "external" sensuous sensations of movement and understanding how they are closely related. Mobile people feel their bodies—their joints, organs, muscles, and respiratory system—and may be troubled by aching muscles, a nagging injury, excess fat, dehydration, blisters, or poor fitness. I call this "sensing movement."

Fourth and fifth, sensuous ethnographies must account for how corporeally active people have multi-sensuous experiences and attachments to places they are moving in and through. In practice, "sensing movement" and "sensing through movement" often overlap as movement is an emplaced practice. How movement feels internally is influenced by where it takes place and the weather that day.

Sixth and seventh, sensuous running geographies give researchers a training session on how their research about the senses ought to be carnally attuned to and conducted through a full-blown sensuous investment in the practice and the community of practitioners. Moreover, the writing needs to be fleshy and engaging. The sensuous ethnographer must be as perceptive a writer as a practitioner of whatever sport or movement under study.

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17

CONSTELLATIONS OF (SENSUAL) RELATIONS

Space, atmosphere, and sensory design

Erin E. Lynch

I have lost count of how many times over the course of my career as a sensory ethnographer I have uttered the phrase, "I'm going there for work, I swear!" From globe-trotting with travel apps, to gambling in casinos and sweating it out in saunas, I have spent most of the past decade using sensory ethnography to explore the so-called experience economy (Pine & Gilmore, 1999) in places that aim to turn feeling good into a science. In the context of the experience economy, everything from city streets to virtual interfaces are increasingly designed to appeal to all the senses. Throughout my recent work, I have attempted to illuminate both the curation of atmospheres through the sensory design of spaces and the precarious, uneven, and thoroughly multisensory experience of co-producing these atmospheres and spaces with others (Lynch, 2023; Lynch et al., 2020).

Before self-identifying as a sensory ethnographer, however, I was an erstwhile criminologist shamelessly flirting with the disciplinary boundaries of cultural geography. I have always been fascinated by the way people make sense of the world around them. When I first began thinking and writing about space and place, one concept from the geographical literature stuck in my mind: the notion that space—far from being a neutral or empty container that is subsequently filled with social action (see Lefebvre, 1991)—is itself a *constellation* of relations (Anderson, 2008; Cresswell, 2010; Massey, 2005; Jiron, 2012). Beyond the delightful parallel between the terrestrial and astronomical meanings of space, I have often found this metaphor useful for understanding how we collectively make (and make meaning through) the spaces of our lives.

The idea of space as a constellation of relations is perhaps best articulated by Doreen Massey in her influential 2005 text *For Space*, where she argues both that space is an event, and that space is rife with possibility because of the emergent nature of that event (Massey, 2005; see also Anderson, 2008). For Massey (2005), conceiving of space as an event—or a "temporary constellation" (Massey, 2005; Degen & Lewis, 2020) where trajectories and processes intersect (Jiron, 2012)—means that space is composed of a multiplicity of interrelations that are fundamentally open: space "is always in the process of being made. It is never finished; never closed" (Massey, 2005, p. 9). This particular openness and, indeed, precarity of space is one reason that I argue attending to the lived experience of sensory design is so important, as we will discuss shortly.

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This notion of a constellation of relations has also emerged in the related mobilities literature. Cresswell (2010), for example, argues that mobility is defined by "a fragile entanglement of physical movement, representations, and practices. . . . At any one time, then, there are pervading constellations of mobility—particular patterns of movement, representations of movement, and ways of practising movement that make sense together" (p. 18). Importantly, Cresswell argues that these "constellations of mobility" have both a time and a place—histories and geographies that pattern their convergence and color their interpretation. As with Massey's "event," the fact that these elements converge into spatial practices that are relatively open and contingent does not mean they coalesce at random or out of nowhere.

While both space and our ways of moving through it are increasingly understood as relational, so, too, are our ways of sensing. I have borrowed the titular "sensual relations" from Howes's (2003) book of the same name, which critiques the "reading culture" metaphor (or the notion of cultures as texts to be read) that long dominated ethnographic practice (see also Chapter 2), and argues instead for the value for ethnographers "coming to our senses" (see also Howes, 2019). Following this tradition, a key concern for sensory ethnography is tracing the relations between senses, or intersensoriality (Bull et al., 2006; Howes, 2005, 2019), alongside the social, cultural, historical, and spatial contexts of sensation (Lynch et al., 2020; see also Classen, 1997; Culhane, 2017; Howes, 2005; Lynch, 2023). Sensory ethnography also "increasingly acknowledges that non-human actors, atmospheres, and traces help constitute these zones of entanglement" (Lynch et al., 2020, p. 194; see also Culhane, 2017; Springgay & Truman, 2017).

In step with this broader "sensorial revolution" (Howes, 2005), Gernot Böhme's conceptualization of atmosphere foregrounds the sensing subject or the "felt body" (Böhme & Thibaud, 2016; see also Degen & Lewis, 2020). For Böhme, "[a]tmosphere is what relates objective factors and constellations of the environment with my bodily feeling in that environment. This means that atmosphere is what is in between, what mediates the two sides" (Böhme & Thibaud, 2016, p. 1). Böhme's (2014) aesthetics of atmosphere turns our attention to the essential *in between* that spans the aesthetics of production and the aesthetics of reception (p. 43). As Bille (2015) writes elsewhere, "atmospheres are the contact zone of *in-betweenness* that cannot be reduced to the object or subject but are always there: not only *in* the relation, but *as* the relation" (p. 269). Because sensory ethnography as a method attunes us to the mediation of those sensual relations—between the body and the environment (built or natural), the "interior" and the "exterior," the self and the other (human and non-human) (Lynch, 2023; Lynch et al., 2020)—the sensory ethnographer is ideally situated to explore the role of atmospheres in shaping how we make sense in, of, and through spaces.

Piecing together these somewhat tangential trains of thought, I would argue (as Degen & Lewis [2020] recently have) that thinking in terms of atmosphere (a la Böhme) also offers a conceptual tool for making sense of Massey's "temporary constellations" of spatial relations. Degen and Lewis (2020) think across these parallel concepts to consider how the sensing/imagining body elicits space and its attendant atmospheres. Using sensory ethnography, they explore how the atmospheres of urban change are felt and, crucially, the multiplicity of uses, understandings, temporalities, and sensory experiences that characterize the urban constellation. While Degen and Lewis used sensory ethnography to explore how the "feel" of a neighborhood evolved for their participants, this approach—of using sensory ethnography to illuminate the coexistence of multiple possible atmospheres and experiences within a given space—has broader applications for the study of sensory design.

One potential advantage of putting Massey's work in conversation with Böhme's when exploring sensory design is that it may help us avoid the pitfall of equating design to destiny when it comes to spatial experience. (Similarly, it backs away from the notion that the production and animation of space is wholly or even primarily the domain of architects and designers.) For Massey (2005) the constellation of relations that make up a given space mark it as a constantly evolving co-production (p. 9). Böhme's concept of atmosphere therefore lets us tap into the "in-between" of this emergent tapestry of spatial relations, while sensory ethnography offers valuable insight into both the immediate, experiential threads of the "event" and the histories and trajectories that lead to and from it. After all, while constellations of (sensory) relations are immediate and visceral, they are also—inescapably—cultural and political (Howes, 2005).

As Edensor and Sumartojo (2015) have noted, compelling design can amplify the affective, sensory, and emotional impacts of atmospheres—resulting in the creation of what they call "atmospherically charged spaces." These atmospherically charged spaces, they note, can often be produced "in the service of power, primarily in reproducing spaces of state and commercial significance, to stabilize the meanings and feelings of place and maintain an even, consistent atmosphere" (p. 253). Edensor and Sumartojo make considerable allowance for the role of the sensing subject in co-constituting atmospheres, with particular attention to festive atmospheres (p. 257). However, I would argue that Massey's (2005) conceptualization of spaces as temporary constellations that are always unfinished points to the value of examining how even more "stabilized" designed atmospheres are co-produced. What role do subjects play in co-constituting these designed atmospheres, and how might the inherent precarity of this co-production disrupt attempts to fix the meaning or "feel" of a particular space?

Grounded in my own research on curated atmospheres, the remainder of this chapter will trace some of the ways sensory ethnography can help illuminate the contingent atmospheres of sensory design. Using insights from my previous fieldwork in three "contact zones" (Bille, 2015)—the locative tour, the casino, and the spa—we will explore the *space between* the sensory design and sensory experience of these curated environments—and hopefully reveal something of the critical potential that shines through the cracks.

Ghosts in the machine: conjuring up the techno-mediated tour through locative apps

Before I tell you a bit about locative tourism applications—what they are and, more importantly, how they can shape the sensual relations of urban atmospheres—I feel obliged to make a confession: prior to setting out for my fieldwork on mobile tourism (in 2015), I had never owned a smartphone. Absent GPS navigation to put me in my place, I nearly always got a little lost while traveling in a new city. Suddenly traveling app-in-hand thus marked a substantial shift in the way I made sense of the world around me. What I did not expect, however, was the extent to which being constantly "location aware" would so often be a disorienting experience.

Locative tourism applications are mobile apps that enable tourists to encounter a site-specific "augmented reality" layer of images, audio and/or text as they move through a given environment. These apps are a type of locative media: "a genre of site-specific platforms that use location-aware mobile technologies to enable interplay between digital content and 'real' geographies" (Lynch, 2023, p. 1; see also Farman, 2012; Frith, 2015; Hemment, 2006;

Reiser, 2009; Tuters & Varnelis, 2006). In their earliest and simplest iterations, these apps allowed users to layer archival images of a given location over their view of that same spot in the present day. These apps were a way of "taking the museum to the streets," and aimed to re-enchant the city by offering tourists the opportunity to "travel through time" (Lynch, 2023). However, as mobile technology has advanced, the assortment of locative tourism experiences on offer has multiplied. The international array of locative tourism apps I studied using sensory ethnography (between 2015 and 2019) ranged from paranormal pub crawls to temple-hopping history tours to full-scale urban spectacles.

Regardless of the form they took, all of these locative tourism apps shared a common requirement: they needed a felt body—a sensing, mobile user, with app in hand—to flesh out their narratives. Since the experiences enabled by locative media require interplay between the "digital" and the "real," locative narrative "relies upon the space outside the frame, and the user's embodied interaction with that space, to fill in the gaps in the story" (Lynch, 2023, p. 24; see also Farman, 2012). Making meaning through locative tourism apps thus requires a precarious process of aligning body, space, and technology. If users cannot get the alignment quite right, then the veil of enchantment dissipates. Rather than viewing the locative app as throwing up a wall of representation between the tourist and an "authentic" experience of space, I argued that the "alignment work" (Licoppe, 2016) demanded by the locative tour requires users to constantly reorient themselves, thus attuning themselves to their environments in sometimes unexpected ways (Lynch, 2023).

Sensory ethnography offered me a window into the disruptive force of uneven rhythms, urban change, and extra-narrative sensations in the locative tour. For example, the dislocative qualities of locative apps—which often required users to reconcile the imperfect union between the locative tourism map and the shifting urban environment—drew attention to gaps and seams between the curated urban brand and the less-governable urban sensorium, and disrupted the taken-for-granted mobility of the techno-extended consumer-tourist through the city. In short, for all its reliance on the apparent precision of GPS, the locative tour is frequently troubled by the glitchy merger of the app world and the real world. Users—at once "lost *in* the city and lost *to* the [smart] city"—take on board the "felt contradictions between the 'fixity' of apps and the rapidly changing urban environment. We experience obsolescence through our bodies, feeling the difference between the city described and the city encountered" (Lynch, 2023, p. 76). The felt body, necessary to set the narrative in motion and yet permeable by sensations that filter in from "out of frame," is at once the lifeblood of the locative tour and the ghost in the machine.

For me, part of what makes the locative encounter so compelling is the extent to which it is, intentionally or not, a co-production with others. Strangely, this is not a factor that most apps seem to account for in their design. Frequently, apps can only align the digital layer with the "real" when the animating user is the only dynamic factor at play; their magic relies on the assumption that the city is at once empty and unchanging, a mere stage for touristic performance. In reality, the "stage" of the tour is constantly shifting and populated with an assortment of extra players who don't exactly know their lines. As such, many of these apps have "people problems": their imaginings of the city are easily disrupted by the presence of urban others who fail to play along (as, for example, when lining up past and present images of the city brings the homeless body squarely within the touristic frame) (Lynch, 2023, pp. 88–89). However, there is the potential for locative apps to embrace the flow of urban others—and, with it, some of the dynamism of the city—in telling their stories.

For example, Montreal's *Cité Mémoire* app, which uses a map and audio guide to narrate an assortment of large-scale nighttime projections throughout the city, manages to not only acknowledge but also capitalize on the urban dweller through its interactive projection "The Creation of the World." Originally projected onto a cobblestone alleyway in the city's tourist-friendly Old Port (it has since moved), "The Creation of the World" traces the steps of app users and local pedestrians alike to tell a story about environmental change and colonial exploitation. As walkers make their way down the alley, they leave digitally inscribed trails behind them that gradually transform the street from a vast night sky, to a river cutting through fields, and eventually to a cobblestone street (this one a projection) streaked with blood. For app users, this interactive tableau is overlaid with audio of an Indigenous creation story, laying bare the connection between the evolution of the city and colonial exploitation at its heart. For people who are only passing through, however, the meaning of the tableau is perhaps more ambiguous, even if the experience is no less captivating. By not only tolerating but courting the flow of urban life, *Cité Mémoire* inevitably relinquishes some control over its framing of the city (at times with uneven effects, as when a group of drunken revelers aim to make their mark—however ephemerally—by writing something in the projected blood). However, it also opens up the possibility for new relations to emerge within that ambiguity, as app users and unwitting strangers come together to momentarily re-enchant the world around them (Lynch, 2023, pp. 150–153).

The work required for the locative app user to line up the streetscape with its branded digital double exposes at once the role of the felt body in "giving birth to the world" (Hansen, 2006, p. 5) of the app, and just how much of the urban encounter is contingent and co-produced with others. While it's tempting to imagine locative tourism as nothing more than a shiny new iteration of the tourist gaze (Urry, 1990)—shuffling tourists between urban sign-posts and framing their vision of urban life—the locative app can never succeed in "fixing" the meaning or sensory experience of the city according to its own narrative. After all, the medium itself demands the coming together of body–city–technology into a constellation of spatial relations, a precarious arrangement that is as necessarily open and unfinished as the stories themselves.

It's all part of the fun: Casino atmospheres in the experience economy

As we move to our next contact zone, I want to introduce you to the Montreal Casino, specifically, the Montreal Casino during Vegas Nights. From the moment you walk up the red carpet and through the vaulted front entrance (ringed by an assortment of gilded, impish demi-gods who smile down on would-be winners), Vegas Nights at the casino are a riot of sensation. The already-heightened sounds and swirling lights of the slot machines, carefully calibrated to build anticipation with every press of a button (Schüll, 2012), are interspersed with the beats of a crowded dancefloor (where tipsy gamblers mingle with Wookies and bedazzled Elvis impersonators). The feathered headdresses of Vegas-style showgirls brush against the too-low ceilings of the gaming machine alcoves as they go shimmering past. Holographic advertisements flick along the bathroom mirrors, inviting you to "eat like a King" and "get a real taste of Vegas" via a syrupy sweet cocktail (topped with a cotton candy cloud). Everywhere, the atmosphere is one of unabashed excess, a more-is-more aesthetic wrapped in sequined kitsch (Lynch et al., 2020).

The frenetic energy and sensual excesses of Vegas Nights at the Montreal Casino are part of a theming exercise that epitomizes the experience economy (Pine & Gilmore, 1999).

Appeals to the more-than-visual senses have become an avenue for curating atmospheres—designed to resonate with consumers amidst the ongoing hyper-visuality of modern life. This does not mean that designers and marketers have abandoned eye appeal; rather, they are increasingly playing to the other(ed) senses in a bid to offer more immersive and engaging experiences, opting instead, in other words, for "sense appeal" (Howes & Classen, 2014). As Edensor and Sumartojo (2015) argue, the experience economy emphasizes "an intensified aestheticizing of space whereby consumption, leisure, tourism and even work sites are themed, scrupulously maintained and highly regulated to avoid sensory and semiotic ambiguity" (Edensor & Sumartojo, 2015, p. 254). Vegas Nights at the Montreal Casino thus offers a prime example of how atmospheres can be curated to facilitate consumption, while simultaneously exposing flaws in the notion that ambiguity can be designed or regulated out of a given space.

The notion that casinos tinker with sense appeal to put gamblers in a money-spending mood is not a new one. Famously, a study by Hirsch (1995) found that piping a pleasant (unnamed scent) into a slot machine area enticed players to spend more on those machines. The curation of casinos atmospheres is a widespread phenomenon, spawning a parallel industry in the sensory design of gambling spaces. Here, signature scents waft across labyrinthine gaming halls carpeted in such a way as to add a spring to your step, the ergonomic "hug" of modern slot-machine chairs comes complete with haptic feedback and built-in speakers, and everything tastes just a little bit sweeter (Bramley et al., 2016; Buhler, 2010; Doyle, 2014; Lynch et al., 2020; Schüll, 2012; Vlahos, 2007). The casino—brimming as it is with the products of sensory design—was thus an ideal venue for me to explore the experience of designed atmospheres through sensory ethnography.

I conducted sensory ethnography at the Montreal Casino throughout 2019 as part of a team of researchers who were exploring both collectively and individually the sensory ambiances of the casino (Lynch et al., 2020). Doing sensory ethnography together allowed us the chance to both play and observe, to share in wins and losses, and to practice "sharing in the sensible" (Laplantine, 2015) of the casino ambiance. Attuning our senses to the casino environment also helped disperse some of the sensory overload of the casino's initial, bombastic impression, directing us to some of the more subtle soundscapes and tactilities—and more nuanced sociality—that can be found in the table games, for example.

In line with the overall aim of this chapter to examine the space between sensory design and sensory experience, I want to reflect briefly on the role that "others" play in maintaining the casino ambiance. After all, not all the work of curating the casino atmosphere is done by the architecture or gaming machines. An assortment of casino employees, from croupiers to bartenders and DJs, are also tasked with managing the ambiance. They help set the pace of gameplay, enchant the experience of play through gestures, touch, and tone, and manage the mood of diverse spaces throughout the casino. In the Montreal Casino's "La Zone" gaming area, for example, hosts essentially MC the experience of gambling for an audience of novice table gamers playing on individual gaming stations, complete with a light show and pop music soundtrack. These performances—while less fixed and obvious than the stupefying sensory overload of the neon labyrinth—are no less by design (Lynch et al., 2020; see also Pisac, 2013). As such, casino employees play an essential role in the production of the casino as an "atmospherically charged space" in the interests of power (as Edensor & Sumartojo [2015] put it). They act to smooth out the action and stabilize the mood, folding the highs and lows of winning and losing into a consistent narrative: it's all part of the fun.

However, in addition to the role of employees in the mood management of gambling spaces, our research at the Montreal Casino also exposed the role other patrons play in crafting the ambiance of the casino (Lynch et al., 2020). On the one hand, diners at the casino's upscale restaurant lament having to "run the neon gauntlet of slot machines and the 'people who play them' (Nuttall-Smith, 2017)," thus ruining the ambiance (Lynch et al., 2020, p. 207). On the other end of the spectrum, Vegas Nights patrons who lined up to get "married for fun" at the casino's mock Little White Chapel, or who packed the dancefloor alongside pirates and showgirls, filled the air with an unmistakable *joie de vivre* (p. 209). The crowd in the casino on any given night can profoundly shift its atmosphere, making the impact of sensory design on the atmosphere of the casino fundamentally uncertain. After all, the casino floor is not a laboratory. Rather, as we argued, it is a place where "sensory experiences meet and mingle, they permeate, ebb and flow. The casino ambiance is woven together through the experience of gambling not only *within* the casino space but through it—and *with* others" (Lynch et al., 2020, p. 211).

Of course, one event in particular shifted the sensory relations in the casino enormously for a time. Not long after our research in the casino concluded, the COVID-19 pandemic was declared a global emergency, shuttering casinos and other entertainment spaces in cities across the country. When the Montreal Casino reopened, it did so cautiously, trying to lure back anxious players by offering a "touchless" experience of sorts—with plexiglass dividers, stylus pens to avoid touching devices, and with chips and cards only to be handled by the dealers. This new, individualizing sensory organization of the space—though a necessary adaptation—stood in stark contrast to the kind of hedonistic sensory co-mingling we had experienced mere months before. Of course, the casino was far from the only locus of sensory design that found its stars suddenly realigned.

Atmospheres of contagion: experiencing spa sensations in pandemic culture

As our final contact zone, it seems fitting to end with the spa. In the context of North American wellness culture, a visit to the spa is an opportunity for both refreshment and contemplation, the chance to avail oneself of the healing powers of touch, the soothing qualities of aromatherapy, and an assortment of other sensations apparently calibrated to relax and restore. But what happens to the "touchy-feely," highly curated sensory atmosphere of a spa when it bumps up against the pervasive threat of a global pandemic? Moreover, what happens to the sensory ethnography of atmospheres when it bumps up against the same?

As theorized by Sheryl Hamilton (2017), pandemic culture describes how the widespread awareness and apparent threat of contagion in an increasingly globalized world had begun to structure social life to varying degrees even prior to the emergence of the COVID-19 pandemic. Through previous pandemics (from swine flu, to SARS, to Ebola), Hamilton notes that touch had already acquired something of a spoiled identity as a potential vector for disease (a marked contrast from the healing capacities of touch touted by spas). As the science around COVID-19 evolved to acknowledge airborne transmission, however, even the air and the space between bodies took on a tainted quality.

Attempting a sensory ethnography of spas between mid-2021 and mid-2022 was a unique experience to say the least. My research—initially aimed only at evaluating the impact of sensory design on spa atmospheres—was suddenly reorganized around waves of contagion,

lockdowns, and reopenings, and the shifting assemblage of public health measures that came along with them. These measures, coupled with the broader threat of the pandemic, also fundamentally altered the constellations of relations (sensory and otherwise) that I encountered across various field sites during this period.

At the Scandinave Spa Whistler during the fall of 2021, for example, masks were required in all indoor areas (including the dry and steam saunas) but not in outdoor areas. My fieldnotes recall the stifling sensation of steam drenching the mask, each inhalation gluing the drenched, burning hot fabric to my face. The eucalyptus-infused steam, I noted, was actually easier to smell from outside the sauna. One participant interviewed also described the somewhat jarring contrast they felt between stripping naked for a massage while wearing a mask. Both of us wore masks routinely and without issue in our daily lives, but here—given the rote reminder to "take a deep breath" and leave outside stressors behind—the mask was a tangible reminder that life was still far from "back to normal."

The pandemic also noticeably altered the soundscapes of the spa. Though Scandinavian spas in Canada offer a glossy, palatable imitation of their Nordic counterparts, their soundscapes frequently aim to amplify relaxation through tranquility, typically by creating "silent" zones. (Ironically, while often branded as offering an "authentic" Scandinavian spa experience, this individualizing approach to the curation of spa atmospheres spurns the more typical sociality of the Finnish spa, for example [Lambert, 2023]). These "silent" zones are usually not silent, of course—filled as they are with a signature blend of blandly meditative music and flowing water. However, the relative quiet tends to amplify any little sound from one's fellow spa-goers, and—in pandemic culture—a muffled cough is more than enough to break the spell of "tranquility."

In mid-December 2021, a particularly ripe tension hung in the air at the Nordik Spa in Chelsea, Quebec. A new, highly virulent variant had just arrived in Canada, sparking fears of a new wave. (The spa would be closed mere days later by order of public health, as the Omicron wave crashed over us.) That tension crystallized in one of the dry saunas when a middle-aged man—unable or unwilling to read the mood of the room—set about inhaling and exhaling with the full force of his lungs, heaving exaggerated breaths across the sauna at a bench full of incredulous strangers (many of whom got up to leave). As I recount in my notes from that day:

> When he finally leaves, I share a disbelieving smile and a shrug with another woman across the room, the tension beginning to dissipate. The truth is, this man's breathing ritual might have been nothing more than an oddity or a minor irritant in a pre-pandemic spa visit—a legitimate performance of wellness, however exaggerated. In the context of an atmosphere of contagion, it transformed into a threat.

By spring of 2022, the mood in the spa had notably lightened. Face coverings were still required when moving around, and the threat of contagion lingered, but the urgency of the response had dimmed. We had reached the "learning to live with it" phase of the pandemic, or so the public health messaging claimed. Of the two participants I interviewed during this trip, neither gave the virus much thought (save in the steam saunas, where the shared atmosphere between self and "other" is thick and tangible). They talked about the salty taste of the pool water, the rough stone of the pool benches, the heady wafting scents of chamomile and bergamot essential oils in the Finnish sauna, the unequivocal rush of plunging from a hot sauna into a cold pool. The pandemic was still an organizing characteristic of the spa's

sensory atmosphere, but it had faded to a background hum beneath the spa's symphony of curated sensations.

Conducting a sensory ethnography of the spa during a global pandemic—while perhaps not ideal—offered a unique opportunity to explore how overarching, emergent, and "stickier" atmospheres (like the fairly inescapable context of a global pandemic) can disrupt more curated, contained atmospheres (like those courted by the sensory design of a spa). In this way, Böhme's notion of atmosphere can both inform and be informed by Hamilton's (2017) theorization of pandemic culture (where the latter serves as an organizing force for social and sensory relations). It is the felt body situated in relation to both the other and the built environment that holds these atmospheres in tension. Doing sensory ethnographic fieldwork in this context allowed me the chance to embody that tension (alongside my participants) between a multiplicity of atmospheres: between the atmosphere of wellness and serenity we were meant to be co-producing, and what I have called the "atmosphere of contagion" (Lynch, forthcoming) that simmered just below the surface.

Conclusion

I am always conscious that the sketches of sensory experience I provide through my work are ephemeral. They are particular, intimate, fleeting, impressionistic, and partial. They are nevertheless my attempts to render the "temporary constellations" of spatial relations that I am studying (somewhat) sensible, perhaps even atmospheric. Because sensory ethnography aims to situate ways of sensing and sensory experiences within their broader sociopolitical and cultural context, I argue that those ephemeral moments can offer us a foothold into the wider-reaching trajectories that bring together these constellations of sensual relations.

Sensory design is arguably an attempt to marshal those relations into something more predictable, more reproduceable, and, frequently, more marketable. Certainly, sensory designers have had some success in harnessing the "sense appeal" of the experience economy, curating atmospheres in order to maximize capital accumulation. However, the various "contact zones" I have explored here illustrate that even spaces that are positively saturated with sensory design (like the casino, or the spa) cannot design out the contingent nature of sensory–spatial relations. As Massey argued, space is an unfinished project, one we are constantly making and remaking with others (human and non-human alike). So long as the experience economy persists in tugging at our purse strings by way of our senses, examining the lived experience of sensory design remains a crucial task. Sensory ethnography allows us to trace entanglements and trajectories along this shifting tapestry of sensory–spatial relations, to get a feel for the gaps and seams in the warp and weft, and to pull at loose threads that might just lead us somewhere new.

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18
FEELING HELIUM

Marina Peterson

Helium. The anxious delight in hearing one's own newly squeaky voice after inhaling the contents of a balloon, or the grief of a string pulling away from a small wrist, another balloon drifting into the clouds. Helium gives lift to airships that appear to rest in the sky, slowly turning with the wind. Frozen, it cools MRI machines, where bodies lie in cramped stillness, listening to the roar of a motor that liquid helium keeps from overheating. The first of the "noble gases," helium finds its home in the upper right-hand corner of the periodic table of the elements. The noble gases, once believed to be fully inert and non-reactive, are rather "reluctant" to react with other elements and "indifferent" to oxygen (Britannica). Despite helium's tendency toward isolation, it is only alone when extracted and refined. When underground, it mixes (though does not merge) with natural gas, and in the sun, with hydrogen.

The elemental blurs that which is seemingly discrete into emergent, relational qualities (Ingold, 2007; Martin, 2011; Engelmann & McCormack, 2021). With helium, form is unstable and uncertain. Generally encountered as a gas, when subjected to extremely cold temperatures, helium becomes liquid or even a supersolid (Ingold & Simonetti, 2022). Lighter than air, it drifts upward, fleeing the earth and taking its container with it. Its low atomic number makes it useful for diagnosing leaks in high-tech equipment, which, when found, squeezes through with a high-pitched shriek. And while it is the stuff of stars, on earth it is only found underground, a by-product of radioactive decay. Elusive, helium tends to withdraw from immediate human perception, remaining present only in its material traces.

An elemental sensorium is a more-than-human zone inclusive of the non-immediate; its palpability resonates in sense and affect, the im/materiality of forms inseparable from their felt distribution. Temperatures rise as air meets skin and tree and stone with the warmth of the summer sun, the cool of a shadow at once trace and absence. And while helium evades the immediacy of sensory perception, affect around its loss is palpable, ballooning into an atmosphere of its own. Helium moves across registers of the physical and discursive. Its phase-shifting ability offers a metaphor for destabilizing the subject, whose "identity" is threatened by those moments when helium does come into perceptibility, voice rising in pitch, a balloon carrying the tears of a child into the stratosphere.

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Pressure, shadow, and frame provide a triptych for holding things in relation that want to move or escape. Equivocating between adjective and verb, they are wobbly concepts animating things in the world. Each is drawn from the material forms and forces through which helium moves: geological formations and pipelines, sunlight, a crashed zeppelin, and its commemoration. These are encounters with a thing that evades perception, the materiality of which matters, not as metaphor, but as a way of destabilizing human exceptionalism, the durability of matter, and the seeming certainty of perception. Helium is a force, a form of matter that resists enclosure and exceeds human intervention, pushing back at epistemological "containers."

Pressure

The taupeness stood out. The cracked reddish brownish tan of ground and grass echoed in the paint of the portables that dotted the area inside the fence—the fence that we were inside after we entered the security code for the gate, after introducing ourselves through the intercom, after passing under the sign for MACY DICK RANCH. Echoed in the field uniform of our guide (an engineer) and graying blonde hair that fell just to the top of his shoulder. As we reach the gate that will take us to the A-6 well, he wipes a web onto a yellow post, moving an enormous spider out of the way—the spider's safety allowing us to pass.

The flat ground dotted with West Texas scrub does not betray what lies below. The metal cover of the helium well, level with the ground though a darker red, is intended to camouflage—cloaking pipes placed into a pit, rendering them invisible to enemy eyes in the sky at a time when that threat made helium a subject of security. The only sign of something lurking is the words DANGER CONFINED SPACE ENTRY BY PERMIT ONLY. We cast our shadows across the steel cover and then into the concrete cellar, a space appearing after the engineer pulls a protruding handle, drawing back the heavy sheet of steel to reveal a startling splash of color. A yellow gridded shelf clings to the concrete lip, hovering above a vertical turquoise pipe ending in a shutoff valve. Its vibrancy provides a focal point against the vagueness of the landscape. Gray blue pipes and bolts and valves and knobs connect to that which lies beyond: the pipelines that brought the helium to the well, the Bush Dome where it infuses the dense yet porous limestone. Pipelines that also move helium into the refining process here at the Federal Helium Reserve. And pipelines through which helium is now, in preparation for closing the Reserve, sent back to gas companies to further refine and sell. These are drawn in white on a geological image of Cliffside Gas Field that our guide stood next to as we began the tour. Their angularity is at odds with the shaded patches of white in a granite red expanse, an inside out topography with the gas field's networked nature laid bare for all to see.

Helium is a political subject. The US government stockpiles helium in the Bush Dome just north of Amarillo, Texas. The "Bush dome" is a geological structure "with a caprock of shale," the porous holes of which hold helium and natural gas. Initially it was thought that helium would be used for airships, in order to decimate cities from above without hydrogen's risk of explosion. But by the time the engineering, regulation, and infrastructure was in place, zeppelins were a thing of the past. In the United States, helium has only recently moved from being owned and managed by the federal government to the private market—a long twentieth-century history of bureaucratization under the auspices of militarization during which a circulatory system of extraction, pipelines, and storage that moves between the earth's surface and subsurface was constructed. Though an element of the sun and stars,

on earth helium is an effect of radioactive decay deep underground, unearthed through the explosive power of volcanos. Before a need was created for helium, in its separation from natural gas that might be piped to heat homes, the frozen moment when natural gas became liquid and helium remained gas, it was simply released into the air, lost to earth's atmosphere forever. Before, the government determined how much helium could be sold, restricting its circulation at times. A helium shortage is announced in the grocery store, a sign alerting customers that there are no inflated balloons to buy, no tanks to rent.

Our elongated shadows betray the wind that blows our hair, wind that gusts across the prairie and moves the blades of windmills just visible on the horizon, even as electric lines etch distribution across the expansive sky of the Texas panhandle. Out of sight, helium squeals its escape; an alarm signaling failure, danger, and risk.

> When we had super high pressure we've had to close one before. If there's a problem you would hear a screaming leak. You have to close off the head if you hear a sound, it could be any kind of gas.

Helium inhabits the folds of the subterranean, the porous holes and crevices of limestone and the interiors of pipelines. Its *pressure* is a force articulating forms of matter, the relation between the relative hardness of stone and gas. Matter, as fold, models theory, or thought, "territories of contemplation for the mind." In this way,

> Matter . . . offers an infinitely porous, spongy, or cavernous texture without emptiness, caverns endlessly contained in other caverns: no matter how small, each body contains a world pierced with irregular passages, surrounded and penetrated by an increasingly vaporous fluid.
>
> *(Deleuze, 1992, p. xvii)*

The engineer explains that while the field used to have 750 lb of pressure, there is now less than 180 lb and they had to add a booster compressor to get flow—to move the helium out, back to the private companies that provided it. The 2013 Helium Act requires complete disposal by 2021—mineral rights, pipeline, equipment, and helium. "But we can't deliver. The pressure is going down."

As he tells us about their impossible task, I sense the pressure he feels: the pressure to empty the dome of helium without sufficient pressure, the pressure to pay the federal government money owed due to a legal arrangement not intended to ever be called on, the pressure to close the facility without the funds to do so, without the necessary gas pressure—a pressure that turns on lack that is both material (force) and economic (balance)—a pressure drawing on a negative balance in order to enact closure—an absence, a loss that requires something substantive as input. How, then, to bolster these negative balances, achieve the impossible in the face of a loss of pressure. The loss of pressure felt by the field is echoed in a voice emphasizing these impossibilities, a loss of a life's career, of a form and force—a gas and its movement—that will no longer be.

The scientist wears her bitterness on her sleeve. She points out the shelves filled with logs in antique ledger books that she has been told must be saved, archived. "But what is this? What does it tell? There is only log data, no information!" Each line faithfully inscribes a date and a canister number. She has 580 cylinders, some full, that she has to dispose of. She's reaching out to agencies, but there's no money to transport them. She drove canisters to

NIST in Boulder, CO. She can't get rid of them—she can't give them to a private company because it's too much paperwork, can only transfer them to another government agency. She shows us the $15 million mass spectrometer she uses to run a sample. Made in England, it can run 10–20 samples/hour. It stands apart yet pressed in upon by an archive of earlier technology, her handmade sign LABORATORY AND MUSEUM a joke about the material remains she works amidst. A box announcing its contents of inflatable mylar dirigibles—a toy—sits on a counter among a jumble of pressure valves, scale, a light chain, gas canisters, and three-ring binders holding the US Bureau of Land Management Cliffside flare gas emissions data, contingency plan, storm water runoff plan. An antique safe with an immense dictionary resting, open, on a wooden stand, open to "laughing goose." An antique microscope stands on a lab counter. "I don't know what they used this for, we're dealing with gas."

Outside in a shed marked POISONS, 2 ConEx boxes store core samples of every well they each drilled. The core samples are ordered by shades of tan to brown, some more yellowish, some more red, some darker brown. Yellowed labels edged in red announce the location and depth in handwritten text: U.S. Bu of Mines Bivins No-A 1920' . . . 2060'–2 . . .-2250' . . . 1950' . . .-1880' . . .-1710'. These are material remnants of a haptic exploration of the underground, when the subsurface of the earth could literally be held in one's hand, a place accessible only by a borer able to be touched. She translates: shale mixture—Bush #1—gray from dolomite, depth 1500¢ hit brown dolomite. Now acoustic technologies sound the porosity of the earth's mantle, plotting boundaries where one type of rock changes to another, the outer perimeter of the Bush Dome or a yet to be drilled gas field. He extolls the 3D imaging project of what turns out to be an oil and gas consulting firm. The shape of the core sample bottles is enlarged in rows of gas cylinders, held behind a metal bar as if they might escape, one-eyed figures, an audience to a parade. But only our shadows appear to amuse.

At the reserve they purify helium further, removing methane, CO_2, and moisture through a cryogenic process. Dials, knobs, measurement devices, and pressure valves are sensors, perceiving helium in its movement and its separation from the natural gas with which it otherwise mingles. They bring helium into sensibility, make it sensible in their terms and those of the engineers. The screen shows the temperature of the methane pumps: -233, -250. Men watching the pressure levels of the pipelines on a large monitor laugh about playing with bananas in liquid nitrogen, a tarantula shattered into parts, its legs flying. Frozen helium is extremely cold. These are "the best gloves I have and broken in just right."

Flares blow parallel to flags—Texas and the United States—a wind sock showing the wind's direction. I draw a picture after having been told not to take photos of secure areas. But this is not that, just a windblown skyscape of flame and flag, the movement of fossil fuels from underground into the atmosphere made visible. A non-renewable resource, helium exists outside of human agency or intervention. As we leave, he tells me, "we have Seibel's desk in a storage shed." A shared wink, a nod to the history of helium extraction and a national project nearing its end (Seibel, 1969).

Shadow

The sun is over saturated. Where to begin? With its immediacy that also withdraws, its felt presence that comes from so far away and cannot even be looked at directly, or the way it peeks out around the side of a building or through a canopy of leaves, making its presence known by shadows cast on a distant wall, their movement betraying that of

> the wind? Allowed inside through windows, through glass whose molecular structure renders it magically transparent. If glass can let light through, why can't we all? Yet apparently even air is not fully transparent.

Helium was first "discovered" in the light from the sun's corona seeping out at the edges of the moon during a full eclipse. It was 1868, and Pierre Janssen, French astronomer and eclipse chaser, detected a previously unnoticed yellow line in the sun's spectrum in Guntur, India, where he had traveled to witness the moon move across the sun. English astronomer Norman Lockyer, seeing the same line later that year without knowledge of Janssen's discovery, named this yellow line Helium after the Greek god Helios, presuming it to be an element found in the sun but not on earth. Later, Italian physicist Luigi Palmieri detected the same yellow line in Mount Vesuvius' molten lava—an astral element contained in earth's geological folds until a volcanic eruption brings gases of the underground to the earth's surface.

Lines betraying the presence of helium in sunlight are named after Joseph von Fraunhofer, who had noticed black lines in the solar spectrum while developing achromatic glass. He developed a system to refract light through a slit, where it cast a swath of light, red to violet with occasional black lines whose wavelengths he carefully measured. Later, Kirchhoff and Bunsen mapped these onto the refracted light cast by the emission of heated elements. For Fraunhofer, the prismatic refraction of sunlight was a tool to test the transparency of glass in a quest for consistency. His was a craft of melting and stirring, keeping the molten material uniform from the bottom to the top of the giant vat, housed in a workshop in a Benedictine monastery tucked away in the Swiss Alps (Jackson, 2000). The sun was secondary to glass, a manufactured material used largely at the time for surveying territory, the borders of a nascent nation-state measured and mapped through a process that used the stars to draw the contours of the earth's surface. Though the sun was primarily an instrument rather than an object of curiosity or exploration in itself, Fraunhofer's experimental proclivities exceeded the constraints of his work, shadows of chemicals absorbed by the sun revealed through a quest for transparency.

Helium Time Columns Monument in Amarillo, Texas, commemorates the centennial anniversary of helium's detection. On the day we visit, past, present, and future converge as the monument looks back on a moment 100 years before its creation, the shadow of its gnomen tracing the earth's rotation awhile two remaining time capsules await their future reveal. Three long aluminum legs, equidistant, form a tripod supporting a vertical column that disappears into the glare of the sun. The gnomon, "one that knows or examines," glints against the cerulean blue of the sky, casting a slowly moving shadow as the sun moves across the sky. The legs' tips end in little flat protrusions, emulating the gas canisters in which helium is stored and circulated. In the base where they meet, four balls—two silver, two black (two neutrons, two protons)—cling to a rod within two overlapping circles of metal, just askew. Fixed representations of the orbits of helium's electrons, they are meant to convey atomic movement. The monument's parts are symbolic of incongruent things with only partial connections. Helium's atomic structure is represented in a much larger scale, cast in aluminum. Its use by "man," "industry," and "science" is echoed in three-time capsules to be opened in 50, 100, and 1,000 years after its inauguration.

A sundial is a "shadow clock." Here, alternating "rays" created by differently hued concrete direct the visitor to numbers touched by the shadow of the gnomen over the course of the day. The shadow is present time, the when of now, arcing imperceptibly. It is specific to exactly where it is, its time singular to its location. The irregularity of the shadow's

movement conveys earth's wobble, its less than regular shape, its angled axis in relation to the sun. Only with clock time organized for railway travel do we account for a difference between rhythm and regularity, between process and precision.

Shadows emerge in a relationship between light and that which is not fully transparent. Though strong, clear shapes can be cast by a solid object, waves in water or clouds or blown glass make shadows that are more diffuse, dancing with the wind or blending into one another. We say a shadow is "cast," meaning it is thrown. But the word also echoes a sculpture made by pouring a hardening liquid into a mold, bronze or concrete or another durable form. In this way, a shadow wavers between an effect and a thing in and of itself. Shadows are found in the edges of rooms and are the quality of a darkening space. A shadow tends to suggest absence even as it might take on a life of its own—gathering wide-ranging interpretations, from the misrecognition in Plato's cave to an animated part of the self attached to Peter Pan. In Tanizaki's *In Praise of Shadows* (1977), architecture, pottery, and Noh theater draw the reader into darkness, into surfaces and corners and mystery. Shadow is a quality or condition, something to pause and settle in to, quietly, with stillness.

Only a cyanotype reverses the tonality of the shadow, the object obscuring the sunlight appearing bright white while the sun's light renders the treated paper blue. An object is evident as void, white that comes across as absence, the sun's light manifest in the deep indigo hue. A relationship between sun and thing emerges in front of our eyes as we watch the contours of a leaf, the body and borders of something laid flat on the paper, or gradations tracing a shadow of a body's volume becoming visible in the space of absence, the blue surround slowly deepening. A relationship in which the cyan surround is as significant as its absence in showing a difference between the space where an object lay and where it did not, the sun's touch spanning plant and paper and beyond. Alternately referred to as "sun print" and "shadow print," a cyanotype registers relations between sun and shadow, illumination and darkness that evoke those of an eclipse. While the red of a lunar eclipse is caused by the earth casting its shadow on the moon, in a solar eclipse, the moon's solid shape stands between earth and the sun. Rather than a shadow on the sun, it is apparent in the transformation of shadows cast on the ground, the remaining crescent of the sun echoed in the shape light takes between the shadows of a tree's leaves.

The sundial's gnomen is also in relation to the sun, registering the earth's rotation that composes day and night, the shadow an assemblage of sunlight and extruded matter. Placed in the path of the sun's rays, it basks in its light and warmth, takes it for itself and gives us its shadow, moving, slowly, across a numbered half circle, "a murmured conversation between light and darkness, a gesture" (Maulpoix, 2005, p. 33). The day we visit the Helium Time Columns Monument in Amarillo, Texas the sun sparkles along its edges, the silver aluminum glowing with its rays, a stark shadow cast on the ground directly below showing only two of the orbs nestled in the crux of its legs. The sun saturates everything: air, the brilliant blue of a cloudless sky, skin, the gleaming aluminum, trees, the granite ground. We squint into the camera against its glare.

The monument's future is already past. The opening of the 2018 time capsule was a local event, its contents displayed for a month. Snapshots of people standing around a table in a basement space, bemusedly sorting through the things they found, were posted online. The contents included a copy of *The Weans* by Robert Nathan, Pyrex pans, a Scotch audio recording, and *The Changing Role of the International Executive.*

Frame

In 1925, the *USS Shenandoah* drifted into the airspace of eastern Ohio while on a tour of Midwest state fairs. There, as songwriter Arthur Fields penned, "the furies of a raging angry sky came down upon the giant airship and took her by surprise." A zeppelin is designed to float in the air, held aloft by hydrogen or, in this case, helium. It coasts along carried by the wind. To stop its movement, it is anchored to something held securely to the ground. Yet on that day, a "violent updraft of warm air" drew the ship up into the atmosphere (Aviation, 2017). Winds buffeted the zeppelin, tearing it apart and sending the stern to the ground while the control car continued to drift another 12 miles before falling from the air. *Men becoming wind, becoming lighter than air, becoming gas cells lined with the stomachs of oxen, becoming tree becoming ground becoming frame, becoming mangled becoming the heaviness of loss becoming cloud becoming air*. Or, as Deleuze writes, a "compound of nonhuman forces of the cosmos, of man's nonhuman becomings, and of the ambiguous house that exchanges and adjusts them, makes them whirl around like winds" (Deleuze, 1996, p. 183).

Heavier than the rising warm air, the zeppelin falls and rises again, three times, its qualities of lift and lightness setting it adrift amidst a milieu of differentiated air pressure that, upon meeting, become wind. Wind, when encountering a hulking object, may carry it along or buffet it from the side with a force strong enough to tear it apart, which is what happened next. The men inside drift to their death in a dangerously detached control car or dumped from the stern into a forested field, while those who managed to stay inside are carried along until it lodges against a hillside. The few who remain in the body of the airship are hard at work, venting helium and emptying fuel tanks to allow the bow to descend low enough to tether it to a tree, jump to the ground, and aim a borrowed shotgun at the gasbags, the heart of an optimistic aeriality turned tragedy. By now local residents had appeared, emerging from their homes to witness the disaster.

* * *

The crash site is that of the stern, no longer there, its debris carried away or scavenged by residents who found pieces of the dirigible in their fields and in the forest for years afterward. Some of these are in the nearby museum, a non-descript trailer, white with horizontal blue lines running across the side, just off the road a bit behind the historical marker. We passed it at first, driving into the town itself where the event left its trace in a monument to a lighter than air ship no longer here, the town still and quiet, its shaded streets empty of people this afternoon. Turning around, the trailer appeared in front of us, coming into legibility as the place we were looking for, had been traveling toward. Suddenly the marker with its proclamation "lighter than air" registered, along with the block letters on the trailer's skin: U.S.S. SHENANDOAH.

"Hi," I can be heard saying through the static of a recording made with my phone, the Appalachian twang of a man's voice becoming audible.

The interior is mostly gutted, with only the kitchen table and its benches remaining from the trailer's intended use. Display cases with glass doors line the walls. They hold black and white photos of the crash along with memorabilia of the disaster, of the Shenandoah, and of zeppelins in general. Mangled dull gray metal pieces we are allowed to touch, hold, turn in our hands, cool to the touch, lie on a table. Framed text tells the visitor the frame of the Shenandoah was made of a material called "duralumin." An alloy with the "strength of

steel" but only "1/3 the weight." In bold we are told to "Note the many different shapes of framework."

"You can try to bend it as much as you want to but it don't bend. It's real solid stuff. Yet it's lightweight." The frame repeats, figured in the bent but unbendable length of metal, in an image of the interior of the airship announcing its finally realized engineered wizardry, in a line from a song that entered peoples' homes through the radio or the round flat form of the 78 record.

Framing is an arbitrary compositional form that draws things together. It sets one thing off from another, bringing into relief or providing "meaning" (Bauman, 1983). "Frames" as analytic devices also allow us to reexamine norms, whether of social dynamics or categories. What might be revealed when one puts a frame around a thing and that which is next to it, or something further afield? Conversely, how might we see moments of parataxis in everyday life—two unrelated things that we generally find ways of making sense of, but that in fact might *not* make sense? How might this kind of exercise make it possible to refigure underlying terms and assumptions, reimagining and recreating them? Lefebvre writes that "all systems tend to *close off* reflection, to block off horizon." How might framing be used to not only separate one thing from another but to push against systematization and classification, to "break up systems, not to substitute another system, but to *open up* through thought and action towards *possibilities* by showing the horizon and the road" (Lefebvre, 1996, p. 63)?

Inside the museum to the U.S.S. Shenandoah many things are framed: documents, photos, commemorative stamps. A frame is meant to disappear, even if elaborate or engineered. The trailer is itself a frame, organizing a proliferation of things of and related to "lighter than air." Things that are solid, durable, and drawn by gravity to a tabletop or a shelf. The very "thing" of interest is nowhere to be found: helium, the actual "lighter than air" substance, which brought all these things together. Helium shifts from matter to frame and escapes, carrying "out a kind of *deframing* following lines of flight that pass through the territory only in order to open it onto the universe" (Deleuze & Guattari, 1996, p. 187).

The airship comes into being through its frame, its fullness making it legible as a form that might lift, a coming into form. An internal framework that presses out from the inside provides the rigidity necessary for a canvas balloon to gain stability, yet light enough for it to float. It fills out a cotton cloth "treated with aluminized dope," 680 feet long with a diameter of 79 feet at its widest width. So large that the crew communicates through speaking tubes. The frame holds a walkway below which 20 gas cells settle, goldbeaters filled with helium that provide lift for a now air-filled ship, ship of the air, airship. Control car and power cars dangle from its belly. In its failure, crumpling as it meets tree and ground, the frame falters, rendering the zeppelin without form, its sense now that of frailty as it succumbs to accident, its "poetic syntax" out of joint; out of place, it no longer makes sense (Boyer, 2015, p. 28). The frame is perhaps not as stable as it seems. How far can we bend the matter of a frame to expand into a temporal gesture or the force of an encounter.

Now spent, the non-sense of a decomposed frame is sorrowful, a mourning of the potentiality once offered by a now ineradicably altered form. Airship turns into crash site as lofty aspirations of flight and bombardment become material to be scavenged and saved. The airship's fight against the pull of gravity seen in the ladder securing the airship to the ground metamorphize into pieces of things stilled in a display case. The museum reframes the material as technological achievement. The crash—palpable in its nearness, a generation removed, a step from the door—was a long time ago.

Over the years, the couple amassed a collection of objects related to the U.S.S. Shenandoah. My attention shifts between the specificity of each item: photos of the crew and scavenged pieces simultaneously redolent with triumph and tragedy. Commemorative buttons and mangled metal. Piano rolls and records with songs celebrating lighter than air flight. A soda (or "pop") bottle marked "Zep up"—a riff on 7 Up, but commemorating the zeppelin. Rings, pens, coins, cards collected everywhere. "We got that off of eBay." "Our daughters got those in Canada" He intones: "We just kind of wanted to have a museum to it." The museum frames an object world of once jubilant commemoration and the obsessive hunt of amateur historians in the haunting tragedy of an early fall morning nearly a century ago. Yet the frame of the crash recedes as the proliferating particularity of the objects comes into view.

What was presented as a memorial to a tragedy soon shifted to something once jubilant, the object force of celebratory buttons and pop bottles and rings and pens and coins and cards carrying the weight of sadness not so much because of the loss of their subject, but due to their status as a now dusty collection of once contained excitement, newly animated in the imaginaries of hobbyists who anchor their enthusiasm for all *things* lighter than air in objects that sit, still, on the kitchen counters of a parked camper trailer. These things shift my expectations about what we had come to see toward an imaginary of a time when people perhaps held jubilant parades to an airship, loud with brass bands and pom poms and the red, white, and blue of patriotism. But also toward the glass display cases filling antique malls across the Midwest, so many objects, people on the hunt for just the thing they want, or something they never knew they wanted, never even knew existed. Once singular, these are now part of an internet world of auctions and desire. An internet world that collects a sprawling community of people searching "lighter than air," a community of homegrown autodidacts, experts in events, materials, forces, and things.

He shows us the outside covering of the zeppelin, cotton cloth painted black on the inside to keep the ultraviolet rays out, sharing expertise about the material that made the interior habitable and the ship able to float. The inside of the gas cells were coated with the stomach lining of "three quarter of a million oxens." The "most non-porous material they could come up with to keep the helium in and not be losing it. Because helium was real scarce at the time."

"I figure the servicemen ate a lot of oxen meat [laughs, breathily] for awhile." He holds the cloth to show us, his fingernails rimmed with black, his work as a mechanic settling into his skin. Things proliferate. "There's a lot more stuff tied into it than what you really think about."

Avoiding the Hindemith as the Shenandoah's even more spectacular cousin—but held aloft with hydrogen, not helium—the Shenandoah swells in significance as artifacts accumulate.

The first dirigible using helium, it is singular in its crash, here, in this place, celebrated—and then mourned—across the country and the globe.

"There are a lot of people interested in lighter than air." I think of the members of the Lighter Than Air Society scattered across the country, connected through newsletters and online resources, shared practices of frequenting antique malls and auctions to search for commemorative objects to add to their collection of things that is also a collection of knowledge. A public in formation. I imagine joining a group of lighter than air afficionados, receiving newsletters in the mail and traveling across the country to attend their conventions. I too might stop at every antique mall on a cross country trip, obsessively peering into display cases to find commemorative buttons celebrating the U.S.S. Shenandoah. As a frame, the museum

to the U.S.S. Shenandoah does not quite settle. It is unstable, more like helium or mangled aluminum. What, exactly, are we drawn into, and what do we do next?

We do not go to the crash site. The empty field a memorial to an event that happened nearly a century ago still resonating in monuments and historic markers and objects filling the trailer we were just emerging from, our eyes readjusting to the light of the day. Instead, we go and have ice cream at a place recommended in local internet guides, overdosing on sugar delivered in an airy frozen mound doused in fudge sauce and piled high with whipped cream. Later I catch a glimpse of the field from the freeway, driving east on a stretch where a mountain lion had been encountered roaming amidst the traffic after escaping from a farm whose owner had set his collection of exotic animals free before killing himself. A spite to neighbors, some said (Post Staff Report, 2011). I've often imagined going and looking at the field. It seems important to do this, to stand before it, this space of absence. A seeming emptiness effected by the event of the crash, its monumentality remaining as void that elsewhere would appear simply as a field. An emptiness echoing the imperceptibility of helium.

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19

PLAYFUL SENSUOUS PEDAGOGIES

Observations and reflections on teaching sensual ethnography

Dennis D. Waskul

I have been fortunate that, for nearly all my career, I have taught in a department of sociology that offers a course explicitly on ethnography and, better yet, I have had the good fortune to teach it once each academic year. In fact, I consider ethnography and sexualities to be my two signature classes. And, as odd as it may seem on the surface, my general pedagogical approach to both courses is remarkably similar. On the one hand, for over a decade, I have been fascinated in sensual ethnography and have had excellent opportunities to experiment and innovate with its potential. I suppose, like any other teacher, I necessarily teach what I have learned, and thus sensual ethnography is a part of my entire ethnography course curriculum. On the other hand, I have always taught my sexualities class in a manner that emphasizes the sensuous lived experiences of sex—the ways in which embodied experiences of sex are shaped by society, culture, and history—in sharp contrast to normative sexualities curricula that tend to emphasize sexual identities, politics, anatomy, and just about anything other than the profoundly sensuous experience of sex.

Consequently, I would like to believe that I have learned a thing or two about sensual pedagogies and, specific to this chapter, on teaching sensual ethnography. But I am not that arrogant. I have only learned what I have found useful and helpful for me and what works for my unique pedagogical goals, styles, and values. Thus, in this chapter, I share my observations and reflections on teaching sensual ethnography based strictly on what I have personally learned. I offer these insights with an important "in my opinion" caveat that humbly recognizes that what has worked well for me may be a dismal failure for someone else.

On teaching what can be learned but not taught

There is a special category of human activities that can be learned but not taught. The classic hackneyed example is riding a bike—but so too are things like juggling, surfing, playing sports, creating works of art, making music, cooking, teaching (effectively), and so on. Most of these kinds of activities have an abundance of texts that provide useful perspectives on the various theoretical, methodological, pedagogical, and aesthetic foundations of those activities. But, by way of example, one does not become a musician by mastering one's knowledge

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of music theory, as helpful as that is. One only becomes a musician by playing and ultimately making music which, of course, is enhanced by the application of music theory.

Acknowledging that some things can be learned but not taught opens a door to a more nuanced understanding of both teaching and learning. A rudimentary definition of teaching is to show or explain how something is done—including acts of perception, analysis, and understanding. While it is possible to quibble over minor details, such a basic definition of teaching is fairly straightforward. Learning, however, is more complicated. Learning entails gaining knowledge or skills in something by study, experience, being taught, or some combination thereof. Hence, not only are there some activities that can be learned but not taught but, if we reflect on it honestly, only a small fraction of what a person has learned over their lifetime has been something they were formally taught—and I think acknowledging that goes a long way in making teachers more effective (and humble).

After my first few years of trying to teach ethnography with marginal results (at best), I eventually concluded that ethnography is equally something that can be learned but not taught. I vividly recall the moment this occurred to me: a cool fall day in Minnesota on September 22, 2008. I was having another frustrating and unsatisfying experience with my ethnography class. Once again, my students were just not getting it, producing shoddy efforts, and I am sure they were as frustrated with me as I was of them. I genuinely felt I was wasting my time teaching the course and I am sure my students felt the same about taking it. I did not understand. At the time, I reasoned that since I had assigned them all the best methods texts that I could find, spent copious time talking about those methodologies and their various applications, there should be no excuse.

In what I now understand as a classic act of blaming the victim, I concluded for the second year in a row that students just were not reading what I assigned or paying attention in class. But later that evening a good deal of guilt sunk in as I genuinely reexamined the texts that I assigned and reflected on the content of what I so desperately sought to teach them—but now with new eyes and a question that, embarrassingly, I had not previously considered: *Is this how I learned to conduct ethnographies?* The answer is a resounding *No!* The next class period, I issued a syllabus addendum, omitted all those methods texts, and fundamentally redesigned the course in which the goal is not to for me to *teach* but, instead, to create a structure and context in which *learning can occur*. Since that day in 2008, I have taught ethnography every year but never used the classroom to formally teach anything.

I am now confident enough to make the statement that ethnography can be learned but not taught—and spend a good amount of time emphasizing it—on the first day of class. I find that most students are either perplexed or think I am joking. I understand. Over the course of many years, students (especially undergraduates) are more-or-less indoctrinated into a static model of learning in which they are often a mere passive recipient of knowledge that is given to them, often on a one-way street, by texts read and words spoken by teachers and/or their stand-in assistants. Hence, it is small wonder that "learning" is so frequently measured by how much the passive recipient can retain and regurgitate. Thus, for many students, this is a novel situation: enrolled in a class in which they are expected to learn about a subject of which the professor is now emphasizing that he cannot teach them. But that is the key.

I suspect most ethnographers will admit that no one taught them how to do it. Instead, ethnography is learned through experience—both vicariously (mostly from reading the ethnographies of others) and by doing it (and continuing to do it no matter how incomplete, awkward, and sloppy those early attempts may have been). But very few of us did it alone,

especially at first. We had mentors that were both co-present and mediated. Likewise, this is an effective strategy for creating a context for students to learn what cannot be taught. To accomplish this, I find explicitly methodological texts counterproductive, although potentially helpful resources for more advanced students. Instead, I find a much more effective pedagogical strategy is to build a curriculum around opportunities for both vicarious and direct learning: reading many kinds of ethnographic works, while also creating opportunities for students to literally play with how they can approximate what they have learned. But teaching *sensual* ethnography adds an additional interesting layer to what can be learned, and that will be the focus of the rest of this chapter.

On recognizing and expanding modalities of data collection: passing the sniff test and re-presenting sensual experience

My ethnography classes are mainly comprised of undergraduate sociology majors, and most of them have little or no previous exposure to ethnography. In the program in which I teach, and I suspect most elsewhere, ethnographic texts are seldom assigned at any level of collegiate learning (an issue worthy of discussion in its own right). In fact, on the first day of class—and after briefly introducing myself—I routinely start with the same simple question: "Can anyone explain to me what ethnography entails?" Almost universally, after several long moments of listening to proverbial cricket chirping, someone will give an honest effort at answering the question. But, almost always, it is obvious that none of them really knows—which allows me an opportunity for some welcomed tongue-in-cheek commentary on the motives for what might compel a student to enroll in a class for which they have no clue what they have signed up for.

I have found that to accelerate the learning curve, for the first third of the course each day an ethnographic text is assigned (i.e., a journal article or a chapter from a book). Students write short reflection papers, and we spend the class period dissecting what was read substantively, methodologically, and aesthetically. The trick here is to provide students with engaging texts that collectively expose them to a wide variety of ethnographic forms of data collection, data re-presentation, uses of thick description, and purposive storytelling. I find this portion of the course highly rewarding given that in a short period of time, most students go from knowing almost nothing about ethnography to genuinely appreciating and enjoying them—at least as a text. We will find out later if they feel the same when it comes to producing ethnographic works themselves.

On Monday, January 31, 2022, I met with my ethnography class to discuss the first chapter of Phillip Vannini and Jonathan Taggart's *Off the Grid: Re-assembling Domestic Life* (2015). I follow that class by viewing their the accompanying video *Life Off Grid* (2016), which students find beautiful and engaging in ways that the text alone could never accomplish no matter how skillfully it is written. It is a good context for discussing the merits of using media other than written words to re-present subject matter more fully, reach broader audiences, and potentially move our audiences in more profound ways. But today we are just discussing the text. Per usual, students are especially engaged by Vannini and Taggart's exceptional use of thick description—exactly what I am hoping they will pick up on, for it corresponds to an assignment in which each student will have to give their own shot at constructing a thick description of their own for the first time. And, equally per usual, students identified numerous areas in the text where they felt especially engrossed in the descriptions that Vannini and Taggart provided of people, places, environmental variables, and the things

that people did and said. But one especially bright student spoke up in contrast to the groupthink of the classroom. "I actually wanted more" the young woman said and continued, "I don't think it was thick enough." She proceeded to explain:

> Yes, the descriptions were thick enough to give a rich view of what these people look like, where they are at, what they are doing, and what they say. But I wanted to know what things smelled like, tasted like, felt like. It felt incomplete.

In that immediate moment, I could only respond with a smile. We had not yet discussed sensual ethnography—that is the topic for class next week—and, hence, I could only reply, "Let's hold on to that thought until next week. I promise we will expand on that idea much more fully at that time."

Interestingly, for me this is not the first time that "smell" and ethnography have been associated with one another in classroom. In graduate school I was fortunate to have multiple mentors who were ethnographers. I recall one from whom I took a few graduate seminars and, although I enjoyed what he taught me, for various reasons he would never closely mentor me. I remember this professor because of a phrase that he would frequently use, and that is what I remember most of him and his courses. The professor would frequently claim, "Your thick descriptions are not thick enough unless I can *smell* the participants in your research" (always placing verbal emphasis on the word "smell"). And, consequently, in response to our assignments in the class, he would often say things like "I can't *smell* them yet," or some variation thereof, to indicate that our descriptions are too "thin" for his standards.

I am certain that my professor was using smell as a metaphor—and a good one at that! I have used my professor's clever metaphor many times in teaching ethnography. I have come to call it the "sniff test" and, as I read student ethnographies, I make it clear that their goal is to create thick descriptions that are rich enough to allow the reader to feel like they are close enough to the subject to be able to smell them. Yet, as useful as that metaphor has been, it never occurred to me to think of it as anything more until Phillip Vannini and I began our studies of human sensuous experiences (Vannini et al., 2010a, 2010b, 2010c, 2011, 2012; Waskul & Vannini, 2008; Waskul et al., 2008, 2009). As I now understand, when relevant and useful, there is no good reason why a thick description could not be odiferous. Indeed, as my insightful student pointed out, Vannini's descriptions are incomplete; the wet and humid pine forests, the shadowy inlets of Clayoquot Sound, the "slimy sheen of freshly split sockeye blood mixed with seagull shit"—all have a distinctive smell that is an integral part of the emic experience of being in these distinctive environments that is fundamental to the lifestyles of the people that Vannini and Taggart (2015, p. 3) sought to understand. But, in all fairness, ethnography—sensual or otherwise—necessarily must re-present through some modality that can never fully capture the totality of the original experience. Thus, my student may have wanted to know what things smell, taste, and feel like as a part of the ethnography she read—but that may not have been relevant, and perhaps counterproductive, to what Vannini and Taggart sought to achieve in their ethnography.

The objectives of some ethnographic works might not be enhanced by the inclusion of sensual experiences. Equally, however, I argue that there are other ethnographic works for which sensuality is mandatory for a full, rich, and complete analysis. I will offer two examples and, since this chapter is about teaching sensual ethnography, both are from a previous student in my class.

Kendra Klump first took my ethnography class as an undergraduate in the spring of 2011. Kendra quickly developed an appreciation and fascination for ethnography, which greatly appealed to her considerable talent in word-craft and enormous creativity. Kendra is also an admirably bold and fearless person who, at the time, was earning money as a nude art model for the Life Drawing art class on campus and, hence, routinely poses nude in front of 20 or more of her fellow students on campus. So, when it came to selecting a context for conducting her own ethnographic works in my course, naturally Kendra chooses the experiences of being a nude art model.

The experiences of being a nude art model are profoundly sensual, and any ethnographic re-presentation would be woefully incomplete without incorporating that fundamentally embodied experience. Kendra implicitly understood this and needed no encouragement to intimately weave those sensual experiences into her ethnographic thick descriptions. With Kendra's permission, I offer one:

> The wetness of the drop leaves a trail on my skin as it runs slowly down the fullness of my breast. It pauses momentarily at the crease where the flesh of my breast rests on the skin underneath it before continuing its path to my ribs. "*Shit*." I think to myself. The dampness at my brow increases slightly, causing the golden hair there to turn a shade darker than usual. My right arm is draped across my lower back, the knuckles of my fingers tentatively placed against the upper part of my left butt cheek. I roll my right shoulder forward in its joint in an effort to move my arm just enough to brush the drop of sweat off my ribs. *Failure*. The drop slowly continues on its path down my side, inching towards the indent my abdominals make in my body, right above my hip bone. I wonder if everyone can see this drop. They have to, it feels huge. Is it huge? How big is it actually? Does it feel bigger than it is, or is it actually *that* big? Everyone has to be able to see it. *Embarrassing*. My thoughts are racing and I can feel more sweat form on my forehead. "It's my damn hair and these lights. They make me hot enough to sweat but it's cold enough in this room that my sweat makes me freeze. Awesome, just awesome. And that one drop of sweat is still going. "Yep, I bet everyone can see it" I think to myself. I give the exaggerated shoulder shrug one more try; ***utter*** *failure*. "Fuck it." I think, almost saying it out loud. With this thought I move my left arm, which had been laying lifelessly on top of my head, elbow at a ninety-degree angle, to use the palm of my hand to brush the sweat drop back up its trail. Nobody bats an eyelash. "Ah, much better." I replace my arm to its previous position on top of my head. I fight it but can't keep my lips from twitching and forming a slight smile at my newfound comfort.
>
> *(Klump, 2011 pp. 8–9)*

Impressive. And, I would argue, only by carefully including these and other intimate sensual aspects of being a nude art model could Kendra accomplish that coveted emic perspective that ethnographers so deeply value. In my assessment, Kendra accomplished that masterfully—which is saying a lot coming from a male reader who has absolutely no point of reference to understand a woman's experience of being a nude art model. Yet, in reading this account, I can not only see but also *feel* that bead of sweat as it slowly rolls down Kendra's body.

Fast forward three years to 2014, and Kendra is enrolled in one of my graduate seminars and wants to further pursue her interest and skills in ethnography. Kendra is no longer a

nude art model and is now playing on the college women's rugby team. Kendra decides to conduct an ethnography on the rich, colorful, and highly ritualized idioculture (Fine, 1979) of her women's rugby team. Although the focus of her analysis is cultural, the experience of playing rugby is once again profoundly sensual. And, here too, Kendra finds it helpful to weave those sensual experiences into her ethnographic thick descriptions when necessary or desirable to convey the emic experience of playing rugby more fully. With her permission, I again offer one:

> My breathing is labored, each inhalation of the air around me clawing down my throat and searing into my lungs. The only dampness in the desert that is my parched mouth is the blood oozing from the cut on the corner of my split lower lip. Metal and dirt; the taste permeating my mouth, the leaden feeling in my legs, and what appears in my line of sight. A flash of silver as the searing sun glints off the quarter inch steel protruding from the bottom of a cleat aimed straight for my head. The weight of the body on top of me keeps me trapped, I am unable to move for fear of snapping the elastic bands that are the tendons holding my knee from rocketing into a thousand different directions. All I can do is hide my face under my already bloody and bruised arms and hope that the owner of that ominous cleat extends their step by an inch. They don't. The cleat peels a strip of skin from my wrist to my elbow and grinds it into the ground, the steel of the cleat and the iron in my blood once again mixing metal and dirt.
>
> *(Klump, 2014, pp. 14–15)*

Again, impressive. Klump's thick sensual description allows the reader to not only intellectually understand—the bulk of her ethnography of the idioculture of her women's rugby team—but, in this case to somatically *feel*.

If we agree that certain ethnographic works either must include sensual experiences to be complete or would greatly benefit from doing so, then how does one nurture and develop those skills for students? After all, this is not an easy task—and especially if the modalities of our ethnographic re-presentation are limited to words (which, tragically, is all too often). Words are woefully ill-equipped to capture what things smell, taste, and feel like (although a lot better for capturing what things sound and look like). But recognizing that limitation is not an excuse for omission. We may lack rich vocabularies for expressing sensual experiences, but that does not mean it cannot be done. In fact, I argue that the general underdevelopment of sensual ethnography is more a product of not prioritizing those aspects of human experience in our expectations of and for ethnography, but also because of a lack of opportunities to develop and sharpen those skills of re-presentation.

Of course, to effectively teach sensual ethnography, one must both prioritize sensual experience as potentially relevant data to include in ethnographic thick description and also invent opportunities for students to play with how those skills can be developed. The former part is easy: just convey a convincing argument and supply students with evocative examples of sensual sociology to ground and illustrate that point of view. Creating opportunities for students to play with sensual ethnography for themselves is trickier. There are a variety of ways that I accomplish this. For example, providing students assignments in which they play with taking traditional field notes and otherwise documenting what people do, say, look like, and the environmental details in which interactions take place. But then follow that with assignments in which students play with taking field notes and otherwise documenting only the sensual experiences of what things smell like, taste like, sound like, and feel like in that same

environment of observation. And then, to bring the assignments full circle, to have students blend those two sets of field notes into one sensuously thick description of whatever context they choose or have been assigned for their observations. Although, admittedly, I have found this strategy effective only after a prior in-class assignment in which we break the ice on the challenges of re-presenting sensual experiences in the first place—and I accomplish that by use of snack-size bags of potato chips.

After students read a variety of sensuous ethnographies and, hopefully, gain an appreciation of how they can be constructed and their potential for achieving the aims of ethnography, per my usual pedagogical practice, it is now time that students give it a try. Their first attempt involves a class period in which I pass out to each student their own snack-size bag of potato chips—but instruct them not to open them yet. I then provide students the assignment, the thrust of which is to

> Carefully consume the potato chips that you have been provided. Write precise notes on paper that capture the taken-for-granted sensual experience of eating potato chips. Pay attention and document things you normally would not. Jot immediate notes on how you describe the various layered experience of eating a chip, and then expand on them as you eat the next chip. Address the many sensual elements that make up the totality of eating potato chips. How does the chip feel? Do you detect an odor? What is its texture and flavor? How does that texture and flavor change over the course of consumption? What do you hear when you open the bag or as the chip is consumed? How do you manage the residue of the chip on your fingertips? The more you pay attention, the more you will discover that this one singular and seemingly simple act of eating a chip is a highly complex and layered set of numerous sensuous experiences. Using your notes, *write a sensuous thick description that, to the best of your ability, captures the totality of the experience of eating potato chips.*

I have discovered potato chips are especially advantageous for this assignment, and entirely because of their uniquely sharp texture, flavor, smell, taste, as well as the way that the act of consuming a potato chip profoundly transforms all those sensuous elements into something else. To be fair, this is not an easy assignment. And yet, I am often impressed with the results. For example, here is one student's effort that was submitted to me on February 9, 2022:

> When my hand makes contact with the bag, I hear the all too familiar crinkling of plastic that separates me from the hundreds of delectable bits that hide inside. The packing bulges slightly from the pressurized air that protects the chips within. The smooth surface of the wrapping gives way easily with a satisfying "Squeeeek" as one seam is perfectly severed from the other. I gingerly pick out the first of many chips that are to get acquainted with my tastebuds. The chips feel grainy, almost like they had been coated in a very fine dust or sand. The dust gets stuck to my fingers which are now greasy from the oil layered just under the dust. I know from prior experience that this type of chip is fragile, in some cases akin to a butterfly's wing. As if to prove a point, the very first chip I grab snaps in half before ever reaching my lips.
>
> Even before the taste, the most prominent feature of a potato chip is the pleasant "crunch" of the first bite as my teeth quickly turn one chip into several hundred. I taste the salt of the chip first as it works furiously to dry out the onslaught of saliva, and consequently my mouth. Then, I am struck with a mild note of sourness that is quickly

> overtaken by the overpowering bitterness of the onion. However, the sour notes tame the ferocity of bitterness from the onion. The "potato" of the chip has very little, if any, taste at all and serves primarily as a vessel for which the seasonings can travel to the tastebuds and stomach. Before completing this voyage however, what was once a rigid chip morphs into a kind of paste that permeates every crevasse of my mouth. Before too long, the paste sets and hardens into a cement that binds to my teeth after several chips have been consumed. Though a small inconvenience, this hardly deters me from eating the rest of the chips and even the crumbs hidden deep within the bag.

Time-permitting, it is even more effective for students in small groups to share their sensuous thick descriptions of eating potato chips, but now with instructions to combine them into one layered thick description that borrows from the bits and pieces from each in the group. And, of course, equally time-permitting have each group present their collective layered sensuous thick description for the class—noting commonalities and differences between the various accounts. Of course, to accomplish these latter collective components of the assignment, it is necessary that the teacher distribute chips that are the same flavor.

In these and other ways, sensual ethnography perhaps cannot be taught but the structure of a course and the activities that occur within it can facilitate learning. And, in case it is not obvious already by my choice of words, I emphasize that students *play* with various ways to collect sensual data, *play* with various modalities for re-presenting sensual experience, *play* with various ways to weave sensual experience into their thick descriptions and purposive storytelling, *play* with the potential of using sensual experience to enhance the ethnographic works that they produce, and *playfully* share with one another both what they have produced and learned along the way. For, after all, play—an activity engaged in for enjoyment—is frequently done both seriously and for pure leisure, and either can be gainfully used as a strategy for learning sensual ethnography. And, above all, if we reflect honestly on all those things that we have learned during our life that were never formally taught, one conclusion might become apparent: *we learned the bulk of it through play.* Hence, one is well justified in adopting a *playful* sensuous pedagogy.

Conclusion

For students to learn, they must first be able perceive problems and issues to be solved. I find this to be a considerable challenge when teaching ethnography. Since students rarely have much, if any, familiarity with ethnography, there is a steep learning curve to simply arrive at a point where problems and issues can be perceived. Adding to the equation the additional challenges of teaching sensual ethnography make the task even more challenging. At least in my discipline (sociology), at present there is very little general awareness and appreciation of the significance of human sensual experience in our analyses and understandings of human experience in society, culture, and history. So, the barriers for teaching sensual ethnography are doubled. But, that said, since students seldom have more than a vague understanding of both ethnography and the potential significance of sensuous scholarship, there is extraordinary potential for students to discover, learn, and appreciate something genuinely new, exciting, enlightening, unexpected and, dare I say, enjoyable. That potential makes the effort intrinsically satisfying.

Admittedly, my efforts to overcome those barriers are not always successful. As with any other course, meaningful learning is something that only students can do for themselves.

Teachers can demand or seduce students into that process (I find the latter is far more effective), but no meaningful learning can occur unless students do it for themselves. In that process, not all students are willing. Some students resist. Some students have other priorities. Some students are entrenched in ideological silos that narrowly limit what they consider legitimate and meaningful forms of research. Some students do not want to play. Or some students are only interested in playing other kinds of games. Those students can be frustrating and disheartening for teachers that are genuinely inspired by what they convey to students and eager to facilitate their learning. There is probably no pedagogy that can mitigate those moments of discouragement. But it does, at the very least, give me a small dose of comfort to reflect on George Bernard Shaw's insightful observation: "we don't stop playing because we grow old; we grow old because we stop playing." Equally, it can be said that we don't stop learning because we start playing; we stop learning because we stop playing. And there is little that we can do for students who refuse to play the game.

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PART 4

More-than-human sensory ethnography

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TOWARD A MULTISENSORIAL ENGAGEMENT WITH ANIMALS

Natasha Fijn and Muhammad A. Kavesh

"As the spider spins its threads," wrote German biologist Jakob von Uexküll (1934, p. 14), "every subject spins his relations to certain characters and the things around him and weaves them into a firm web which carries his existence." The integration of a multisensory approach for the study of cultural webs, human engagements, and material and symbolic relationships has been inherent in the contribution to sensory ethnography over the years. When it comes to cross-cultural perceptions and attunements toward other animals, however, attention toward sensory perception has been downplayed or ignored.[1] In his *A Stroll through the Worlds of Animals and Men* (1934), Jacob von Uexküll (1864–1944) challenged the prevailing presumptions about animals as automated machines governed by instinct alone. To support his point, he propounded two powerful analogies: first, a species' worldview could be thought of as existing within a bubble; while the second, which is more complex but perhaps more helpful, is that an animal, such as a spider, could be thought of as being one player within a larger, communicating orchestra, or ecosystem. Von Uexküll's symbolic and semiotic approach, captured through the concept of *umwelten*, forms the underpinnings of ethological theory by foregrounding sensory perception, and over the years has emerged as a key theoretical concept supporting discussions relating to the "animal turn" in the humanities. "Uexküll's *Umweltlehre*," French philosopher Dominique Lestel and colleagues convincingly state, "remains prominent insofar as it takes seriously the alterity and world-making of animal points of view and the imaginative task required of an ethology that desires to understand them" (2014, p. 130).[2]

Following closely on von Uexküll's heels was the groundbreaking work of the Nobel Prize-winning biologists Niko Tinbergen (1907–1988), Karl von Frisch (1886–1982), and Konrad Lorenz (1903–1989). Acknowledged as the founders of ethology, or the study of animal behavior, they carried out careful observations of animals in the field. Lorenz, for instance, studied geese in Austria from the time the tiny goslings hatched from their eggs. As the geese formed a bond with Lorenz, they would waddle or fly around following him everywhere. Lorenz then employed scientific methods to develop a theory on imprinting and instinctual behaviors. Inherent in his observations was the engagement of the young goslings with their human "foster parents" (Lorenz, 1975; see also film clip on YouTube, Lorenz, 2008). Both Lorenz and Tinbergen argued for ethology to be considered a science, yet they

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would use multimodal forms of output, such as filmmaking and popular books, to convey their observations from the field.

Some of the early primatologists, such as Jane Goodall (1934–) and Diane Fossey (1932–1985), have gained wide popularity by using immersive strategies in the field that were similar in approach to the anthropological method of participant observation. Goodall's findings influenced primatology immensely through her detailed and careful observations of chimpanzee body language and social behavior while living in proximity with the chimpanzees (see the National Geographic's *Jane*, 2017). Initially, it was through the platform of *National Geographic*, in the form of magazine articles and documentary films, that Goodall's research findings and methods, such as tool use in a chimpanzee troupe, were begrudgingly accepted by the scientific establishment.

Do academics studying multispecies, or human–animal relationships, need to move beyond traditional scholarly outputs, in the form of academic books and peer-reviewed journal articles, to aptly convey their findings? Do our prevailing methodologies restrict scholars from appropriately conveying their findings to a large audience? Would an emphasis on multimodal approaches and different forms of output support the scholarly investigation of more-than-human inter-relationalities? In this chapter, we explore the connection between multimodal and multisensory approaches in relation to more-than-human interrelationships. Although research engaging in multispecies studies can extend to microbes, plants, and fungi, our orientation here is toward engaging with other larger mammals or birds through ethnography. Such work is often interdisciplinary in content, drawing on natural history, animal behavior, and ecology to take a sensory-oriented approach to ethnography.

Anna Tsing (2013) has pointed out that there is a conjunction between natural history and anthropology in terms of drawing on detailed, "deep" observations and "critical descriptions" of different kinds of more-than-human sociality. Her attention to knotted sensory experiences encourages us to emphasize *the arts of noticing*, a form of observation that develops while bringing multiple senses together to understand multispecies social relationalities (Tsing, 2015). Her approach continues to inspire emerging literature in multispecies ethnography, indicating how social engagement not only exists through speech but happens through other forms of communication, including smell and touch.

As we focus on multisensory modes of engagement in the field, we cast new light on the senses across more than just humans by paying attention not only to vision but to different forms of perception, such as hearing, touch, or movement. We emphasize how a multimodal approach can open new pathways to examining dynamics of more-than-human relationalities beyond academic text, whether it is through different forms of creative writing, filmmaking, or experiential museum and gallery contexts. An orientation toward multispecies encounters through a sensory approach, promises to constitute new ways of sensing and perceiving the wider world around us. We contend that to understand complex social relationships within ecological assemblages, there is a need to understand the intertwinement between sensory and multispecies theoretical and methodological approaches.

The senses in a world beyond the human

A scholarly approach to sensory ethnography particularly emerges as an effective strategy for unraveling the complexities of human encounters with more-than-human others. Before "multispecies ethnography" became a term of use to delve beyond a purely anthropocentric approach, there were other means of exploration "beyond the human" (Kohn, 2013), such

as ethnozoology, or human–animal studies (also referred to as animal studies, as humans are animals too). Dominique Lestel (2006) has called for more social science-based research engaging with both ethology and ethnography, what he terms etho-ethnology or ethno-ethology, across hybrid communities of different species. One of the authors of this chapter, Natasha Fijn, has a background in both ethology and anthropology. Her book *Living with Herds* (2011a) was an early example of multispecies ethnography in the Inner-North Asian region. In alignment with Lestel's (2006) call for interdisciplinary work on hybrid interspecies communities, Fijn's focus has been on social and behavioral connections within Mongolian herding encampments as part of a hybrid, co-domestic multispecies community.

Another good example of a synthesis of methods between ethology and ethnography is Hartigan's (2020, 2021) recent research with wild horses in Galicia, Spain. The focus of his field research is anthropological in that it culminates in a ritual, the *rapa*, where wild horses have their manes clipped as a form of "domestication" and an expression of human ownership. The setting of the corral that they are herded into for the *Shaving of the Beasts* ritual is not a "natural" circumstance, so would not generally be a subject tackled by ethologists. Hartigan's analysis of the bodily signs and symbols although focuses on horses rather than humans, it is also ethological as he works from a behavioral ethogram to analyze the social engagements between individuals. As Hartigan argues, with reference to focusing on the social signaling of horses, "If animals have culture, then they warrant ethnographic attention. Ethnography was developed on humans, but given that nonhuman social species manifest cultural dynamics, they too can stand as ethnographic subjects" (2020, p. 17).

Kara White (2013, pp. 96–97, 100) employs an interdisciplinary sensory approach, one that combines ethological with phenomenological methods, to interpret the feline gaze. As she integrates sound, taste, touch, and smell, along with the dominant sense of sight/vision, she shows how a multisensory approach enables us to cross the species barrier and to come to better understand the interspecies relationship formed by cat–human encounters. Rather than humans being out of the picture, as would generally be the case in ethological forms of output, she shows how scholars can focus on sensory engagement that occurs in the presence of humans. Such arguments become clear in Lestel's collaborative work with Bussolini and Chrulew (2014), where they build on von Uexküll and Merleau Ponty's theoretical underpinnings to propose a "phenomenology of animal life" that experiences the world through an engagement with the body while actively attempting to move beyond the primacy of the human and an anthropocentric attitude toward exceptionalism (Lestel et al., 2014, p. 144).

From both an environmental and biological anthropology perspective, Tim Ingold (2000) theoretically engages with sensory perceptions beyond vision and argues against conceiving the visual as separate from seeing or sound from hearing. He emphasizes the importance of human learning by perceptual experience, suggesting that while observing and participating in the field, the researcher should be aware of the multisensorial aspects of the surrounding environment. The authors of this chapter, Fijn and Kavesh (2021), have also explored within a special issue in the *Australian Journal of Anthropology* how a multisensorial approach allows us to move beyond privileging the dominant sense of "sight" and "vision" and to engage with more-than-human sensory experiential capacities to grasp the multitude of interspecies forms of communication. Kavesh (2021a), for instance, has discussed how complex activities such as cockfighting, dogfighting, and pigeon flying unravel new details when explored through a multisensory analysis. In his critique of Clifford Geertz's famous study of Balinese cockfighting, Kavesh (2021b) argues that a multisensory analysis that focuses on the interplay of different senses—including the sound of roosters, the smell of their bodies, their

preference in taste, texture of their plumage and muscles, and the sight of their fight—can help refigure interpretative understanding of the activity as a "cultural text."

Such attention to entangled sensory experiences is also foregrounded in the collaborative work by John Law and Marianne Lien (2013) in their exploration of touching and handling salmon. The touch becomes essential to their ethnographic insights in relation to "slippery" ontologies, showing how salmon–human enactments are slippery and elusive both in theory and in practice. Lien writes that effective ethnography must go "beyond words" (2015, p. 16). She insists that species barriers could be transformed through immediate and physical interfaces via materially mediated techniques, allowing the ethnographer to provide sensorial and affective attention to multispecies worlds and channel their imagination to create possibilities for embodied communication.

As Lien asks us to consider the sensory experience of touch and texture for an effective untangling of multispecies ontologies and worlding (2015, p. 67), Anna Tsing encourages us to consider the affective qualities of the smell of matsutake mushrooms in the Japanese countryside, which moving alongside other senses, shapes culturally specific memories and nostalgia, as well as the reenactment of multispecies encounters:

> The smell of matsutake, they say, recalls times past that these young people never knew, much to their detriment. Matsutake, they say, smells like village life and a childhood visiting grandparents and chasing dragonflies. It recalls open pinewoods, now crowded out and dying. Many small memories come together in the smell. It brings to mind the paper dividers on village interior doors, one woman explained; her grandmother would change the papers every New Year and use them to wrap the next year's mushrooms. It was an easier time, before nature became degraded and poisonous.
>
> *(2015, p. 48)*

Assemblages or collectives of humans and more-than-humans rely on context-specific multi-sensorial relationalities to form effective encounters. The BaAka hunters from Congo Basin, for example, possess valuable knowledge of a dynamic forest ecology and animal behavior through their years of intimate multispecies and multisensorial interactions. Moving through vast networks of forest trails—trails that are engineered by forest elephants and followed by many humans and animals—the hunters and elephants pay mutual attention to sensorial movements in order to form a context-specific relationality in the dense forest (Remis & Robinson, 2020, p. 461).

The multispecies ethnographic work in Northern Mongolia and Southern Siberia extends the multispecies approach to include sensory components. Charlotte Marchina (2021), for instance, has examined how herd animals are connected to their homeland and surrounding landscape through mental maps of their surroundings. Part of her methodology involves tracking both herders and herd animals by Global Positioning System (GPS), analyzing the network of trails across the steppe in the form of different colored maps. Anthropologist Alex Oehler (2022, pp. 518–519, also 2021, p. 772) develops the framework for sensory methodology to explore interspecies lifeworlds in South Central Siberia. He suggests searching for ethno-ethological angles, or non-European approaches to ethology, particularly those formed by local and Indigenous practitioners, to explore how humans and other animals constitute shared meaning through ongoing sensory interaction. Alex Oehler and filmmaker Sarah Abbott are leading a five-year project ("Sensory Acts: More than Human Communication in the Circumpolar North" (2022–2027) with an international team, including multispecies

scholars Natasha Fijn, Charlotte Marchina, Victoria Peemot, and Sara Schroer, all of whom focus on multispecies sensorial aspects in their field research to explore modalities such as posture, gesture, scent, and sound as non-verbal interspecies means of communication.

During COVID-induced lockdowns, sensory intertwinement forced humans and animals to form a practice of response-able care. Maythe Seung-Won Han (2022) shows how she and her dog formed a multispecies kinship by co-sharing affective sensory experiences in proximity and how they both helped each other alleviate "proximal loneliness" during the pandemic. Jake Kosek (2010, p. 656) offers an alternative, futuristic union of the senses, where animals (such as bees) become "zoosensors" helping humans to access what is beyond the reach of their senses. In multiple innovative ways, scholars are being continually innovative through joint theoretical and methodological strategies to unravel ways of encountering multisensorial, multispecies intersections between more than just humans.

A multimodal approach: emerging forms of communication

In order to fully engage with and effectively portray different forms of sensory engagements of both humans and more-than-humans, it becomes necessary to go beyond text as *the* form of scholarly communication. There has also been a move away from a single sensory modality with less emphasis on the term "visual anthropology" to incorporate other senses, such as the increasingly used term "multisensory ethnography," as a more all-encompassing form of research (Howes, 2019).

When visual anthropology was still the predominant term, David MacDougall pointed out with reference to filmmaking, "if we consider the visual as offering pathways to the other senses and to social experience more generally, then what may be required of the viewer will often combine psychological or kinaesthetic responses with interpretive ones" (1997, p. 289). MacDougall (2019) has more recently articulated the need for an integrated attention toward the senses, rather than focusing on only one modality, such as vision or sound. He refers to this form of filmmaking as "embodied cinema" rather than purely observational.

Vision, sound, touch, and texture are easier to invoke than the filmic portrayal of smell and taste. Contemporary natural history filmmaking (such as films produced by the BBC's natural history film unit) has explored many different ways of communicating the vast array of unique animal senses, such as night-vision military technology to convey big cats hunting in the dark; cameras that pick up ultraviolet light, indicating the hidden colors of bird feathers to the human eye, the ultraviolet hues of flowers that attract specific insects; or cameras that can detect heat as warm or cool colors, allowing us to visually comprehend the sensory ability of reptiles (such as snakes) when seeking out warm-blooded prey (see BBC Earth, 2011). Some natural history films are more ethnographic in content in terms of being embedded in a place as a part of the surrounding ecology. The BBC Earth documentary *Learning to Speak Turkey* (2018) is one such example, where naturalist Joe Hutton adopts a form of participant observation as he lives with a gaggle of wild turkeys, nurturing individuals from birth through until adulthood, while meticulously recording their vocalizations and body language as field data in notebooks.

There is, however, a difference in the style and ethics of *natural history films* when compared with ethnographic-oriented *observational filmmaking*. Most natural history documentaries are scripted, storyboarded, and subject to direction. A scene may even be portrayed within a set in a studio with a green screen in the background, for example, in the use of macro-photography when filming invertebrates. Unlike the dramatic narrative of the natural

history documentary, observational filmmaking is essentially a mode of research production (Fijn, 2012). It is necessary in observational filmmaking to record events as they unfold, rather than to set up behavioral situations and social interactions, while in natural history documentaries, the purpose is to form a docu-drama for a broad viewing audience from findings that have previously been published in scientific journals.

Observational filmmaking can be a way of gathering data in the field, a means of analysis and, once edited together, can become a mode of academic output or a form of communication to an interested public. Fijn (2012) has suggested that in working with multispecies ethnography, visual and sensory anthropologists could adopt an etho-ethnographic filmmaking approach—primarily observational in style, but with the inclusion of some camera techniques from natural history filmmaking to effectively convey sensorial perceptions, in a combination of cross-cultural and cross-species contexts. An audiovisual segment, for example, can effectively convey vocal signals as audio, but also the bodily, kinesthetic responses which accompany these sounds in visual form, demonstrating a complex means of inter-species communication (see Fijn, 2011b). An etho-ethnographic form of filmmaking, therefore, can be a means of conveying hybrid multispecies community social dynamics.

Emerging technology is increasingly helpful in terms of gaining insights into the perceptions of other beings. An example of an observational feature-length documentary conveying a dog's perspective is *Stray* (2021). The film effectively portrays individual dogs' everyday lives through engaging in-camera techniques from both natural history and observational-style filmmaking with the use of gimbals to stabilize moving shots. The filmmaker intentionally holds the camera at the eyeline of the individual dogs, depicting what life is like for stray dogs who co-habit with refugee youths on the streets of Istanbul.

Mounted cameras (such as GoPros) can be strapped to the bodies of animals, allowing for a perspective on how they move through the landscape. On YouTube, there are numerous examples of dogs engaging with one another in dog parks, fetching objects on the beach, or a rider galloping along a track surrounded by forest on horseback.[3] Professional horse eventer, Emma Wallace (2018), records with a helmet camera as she and her horse jump over a complex array of obstacles, in the form of brush fences and water jumps. It is the breathing of both horse and rider and the verbal encouragement from Wallace that provides insights into the sensory communication between them, in jointly negotiating obstacles while moving at speed. There has been plenty of analysis on the social connections between horse and rider, but less field research exploring different forms of media. Anthropologist Andrea Petitt has experimented with a mounted chest camera in her research on horse–human–cattle triads. She found that horses tend to team up with humans to jointly herd cattle, in contrast to quite a different dynamic when cattle and horses feed together without human direction (Petitt & Brandt-Off, 2022).[4]

In establishing The Sensory Ethnography Lab at Harvard, Lucien Castaing-Taylor invested considerable value in the significance of the sensory experience (see Castaing-Taylor, 2023). Castaing-Taylor and Ilisa Barbash, in the making of *Sweetgrass* (2009), marked a new direction in sensory ethnographic film, including aspects of more-than-human relatedness, through capturing cowboys' engagement with sheep and horses as they undertook one of their last migratory journeys over a mountain range in Montana. The use of radio microphones capturing audio of a cowboy yelling and swearing on a distant mountainside, is indicative of their strategy of collapsing the physical distance between image and sound. *Leviathan* (2013), again a film made by Lucien Castaing-Taylor, in collaboration with Véréna Paravel (with layered sound editing by Ernst Karel), engaged the use of the relatively new

technology of mounted cameras in combination with handheld cameras, to convey the complex ocean soundscape on board a fishing vessel. This resulted in a feature-length multisensory film that is less about human characters, but more about the engagement with the boat, the waves, and the elements. Transient fish struggle with eyes bulging in nets, or a lone seagull flaps around helplessly on a rolling deck, all of which become memorable, visceral images of the struggle for life in the midst of powerful ocean waves.

By capturing key moments in time and in conjunction with contextual and descriptive text, photo essays can also provide a powerful form of sensorial engagement in the multispecies context. Photo essays have a long history stemming from investigative photojournalism. Specialist software (such as Shorthand and StoryMap) can now assist journalists and scholars alike in building a narrative through the integration of text and images online. Fijn's (2020) photo essay focuses on a contemporary ethnographic account of bloodletting on horses in Mongolia, as a contribution to a volume on the sensorially related theme of "fluids." The three interconnected ethnographic narratives of the piece provide an example of the utilization of Shorthand as a tool for layout online, allowing the viewer to scroll down through the images and text to reveal different parts of the interspecies story.

There have been two notable ethnography-focused photo essay series: the Society for Cultural Anthropology series "Writing with Light," and the Wenner-Gren-funded series through their online blog, *Sapiens*. An example of a photo essay, which engages with multispecies ethnography well, is Paul Keil's (2018) "The Death of a Hungry God." The photo essay portrays how a village in northeast India responds to the death of a wild elephant resulting from electrocution on a powerline, depicted through a series of ten images and short descriptions accompanying each photograph.

Sarah Pink in her *Sensory Ethnography* (2009, last chapter) argued for the need for collaborations of multisensory forms of output in the context of performance and exhibition venues, which can effectively include elusive sensory aspects, such as taste, texture, or smell. In the same year, in their book on *Observational Cinema* (2009), Anna Grimshaw and Amanda Ravetz pushed for a more experimental approach toward filmmaking in the form of a combination of art and anthropology. They provide the example of Lucien Castaing-Taylor and Ilisa Barbash's *Sweetgrass* project and how it was then reformulated in an exhibition context, foregrounding an engagement with the senses through playing original rushes. Internationally recognized artist and political dissident, in a project entitled *Omni*, Ai Weiwei (2019) produced a virtual reality artwork that utilizes 360-degree cameras. With an observational filmmaking style and pace, the camerawork highlights the plight of uprooted and displaced elephants and their mahouts. This work has been screened both in an exhibition context and in two-dimensional form within an online piece accompanying an interview with the artist in *The Guardian*.

Both multisensory and multispecies ethnographic elements have the potential to be conveyed as original research in a growing area of experimental inquiry through a confluence of anthropology and art practitioners.[5] This has been vividly demonstrated through an early project in multispecies ethnography, whereby Eben Kirksey and other US-based cross-disciplinary collaborators integrated anthropology with art, science and natural history through a series of art exhibitions in conjunction with academic conferences. Kirksey then brought these works together with text-based contributions in the form of an edited book and an accompanying website (see Kirksey, 2014). These multimodal forms of output, from the outset, became a means of conveying complex multispecies ethnographic concepts through on-the-ground artistic practices.

Conclusion

An entwinement between multisensory and multispecies approaches effectively reveals how knotted entanglements create meanings in a more-than-human world. Such an emphasis is brilliantly displayed by one of the pioneering sensory scholars and ethnomusicologists, Steven Feld. Building on his long-standing field experience with the Kaluli people of Bosavi in Papua New Guinea, Feld contends that reintegrating sensory experiences from the field allows ethnographers to peek beyond the surface and explore the relationship between senses and place, where humans, animals, and ghosts co-live: "as place is sensed, senses are placed; as places make sense, senses make place" (2021, p. 179). Feld moves beyond the sense of sight and suggests understanding the role of sound, ear, and voice through the embodied cultural knowledge and imaginations surrounding acoustic sensations—a sensory approach which he aptly termed "acoustemology" (Feld, 2015[1992]).

"Acoustemology" allows Feld to go beyond his initial research explorations relating to an "anthropology of sound" of signs and symbols to adopt a more embodied, phenomenological approach to acoustics. As he states:

> I had no idea that I would need an equal amount of skill in ornithology and natural history to add to my training in music, sound recording and linguistics. I had no idea that Bohavi songs would be vocalized mappings of the rainforest, that they were sung from the bird's point of view, and that I would have to understand poetics as flight paths through waterways, that is, from a bodily perspective rather different from perceiving from the ground.
>
> *(Feld, 2015, p. 16)*

In a public lecture in Sydney in 2015, Feld describes how once when he heard the croaking of the common toad (*Bufo regularis*) at night, he ventured outside to record the sounds, including his footsteps as a metronome as he was walking down the urban street at night. He subsequently played these sound recordings to Ghanaian musician Nii Otoo Annan, who then composed new lines of musical enquiry through adding drums and base with Feld. This was then formed into a "toadscape" played in person by Annan and Feld at a festival in New York, linking with another species within a completely different cosmopolitan urban space at night. Feld has produced numerous multimodal forms of output, from accessible sensory ethnography as text in books to producing CDs in the *Voices of the rainforest* series, to a combination of soundscapes with visual components in filmic form, to music and festival performances.[6]

Feld's engagement with the senses, with animals and multimodality, effectively captures the trajectory of this chapter. It outlines how a careful entanglement between multimodal approaches and multispecies ethnography can help scholars to convincingly utilize the penetrating role of the senses and the importance of a combination between ethology and ethnography, as a form of etho-ethnology or ethno-ethology. Such a sensory examination enables us to capture a grounded, bottom-up, emic perspective that highlights local lifeworlds and foregrounds the inherent intertwinement between humans and others. While canvassing the breadth of multispecies ethnography that has engaged with the senses, the second section of this paper revealed experimental forms of engagement with multimodal output through a particular focus on sensory perspectives within the usually quite separate genres of natural history and observational filmmaking, photo essays, and exhibition settings.

Integration of a multisensory with multispecies approach offers us an opportunity to rethink more-than-human relationships in the future, particularly when multispecies assemblages are threatened by the forces of capitalism, globalization and human-induced climate change. After experiencing the devastating bushfires on the east coast of Australia in the summer of 2019–2020, Danielle Celermajer's book *Summertime* (2021, pp. 46–48) evocatively shows through a sensory autoethnographic approach, how an understanding of multisensory experiences allows humans and animals to penetrate interspecies worlds, transforming contingent boundaries that restrict multispecies encounters on a threatened planet. As she writes about her donkey, Puzzle, she explains how pain, hunger, trust, and attention form connectedness between and within species—a connectedness that leads to entwinement and entanglement of divergent pathways.

A multisensorial multispecies intertwinement promises the production of innovative and exciting forms of inquiry by a crossing between genres to reach wider audiences beyond an academic few. This does not downplay the role of ethnography, instead it supports current methodological praxis with innovative techniques that carry the potential for interdisciplinary and collaborative engagements. Bridging ethological and ethnographic techniques together, or benefiting from the entanglements of natural history and observational filmmaking, such innovative approaches are promising for embarking upon novel inquiries in the perceptions of more-than-human sensory worlds, comprehending complex assemblages, and new modes of knowledge-making.

Notes

1 David Howes is one of the few specialists in "multisensory anthropology" to have briefly mentioned the importance of sensorial aspects for anthropologists engaging in multispecies ethnography (2019, p. 24).
2 Through her examination of multisensory entwinements between humans and falcons, Schroer (2021) highlights some limitations of Uexküll's *umwelten*, suggesting that accessing animals' worlds are not only possible through empirical observation of the animal's behavior but also through their bodies and senses. Falconers and falcons, Schroer argues, interact by developing their unique experiential, perceptual, and sensory abilities that aid them in knowing other creatures' worlds (2021, p. 143).
3 Using examples of play in dogs, horses, and cats, Nelson and Fijn (2013) reveal how video segments of new or rare animal behavior on YouTube can be helpful as a springboard for the investigation of further ethological experiments.
4 Natasha Fijn has also experimented with the use of GoPro cameras mounted on the head and arm of Mongolian herders or individual herd animals. In relation to the use of a herding tool as an extension of the body (see the film segment Fijn, 2022).
5 There was a large response of enthusiastic scholars and artists participating in an online workshop in 2022, which focused on a combination of multispecies ethnography and artistic practice. Initiated by Andrea Petitt and European-based collaborators at Liege, Uppsala, and Radboud Universities, these scholars have encouraged ongoing connections between researchers and arts practitioners through a Multispecies Ethnography and Artistic Methods (MEAM) Network (2023).
6 Feld's personal website provides a good indication of the range of multimodal forms of output he has produced over the years (see Feld, 2023).

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21
SENSING THE CLOUD
Research-creation as sensory anthropology

Kate Hennessy, Trudi Lynn Smith,
Steve DiPaola, and Amineh Ahmadi Nejad

It's a spring morning in Vancouver, Canada. We (Hennessy and Smith) are setting up a camera in a temporary studio in a warehouse exhibition space called "The Hangar" at the Centre for Digital Media. An exhibition of works in virtual reality (VR) has recently been torn down, leaving a storage room full of broken lumber and plywood, light tubes, and other discarded materials. We have been working with artificial intelligence (AI) scholar and artist Steve DiPaola to experiment with machine vision and its descriptive interpretation of fugitive film stock (Smith & Hennessy, 2020). Encountering the exhibition aftermath, we ask ourselves what these new sensing machines would make of a pile of virtual reality detritus. We are beginning to explore an interest in performance, machine vision, and improvisational collaboration, curious to know how AI-driven vision systems might identify these landfill-destined materials and describe them in new ways.

Pressing "record" on the camera, we begin to roll stacks of chairs used in public programming and carry materials out into the frame to create a sculptural assemblage. Interested in our own collaborative capacities, we decide to work silently, co-making this new artwork, improvising the selection of the materials and the placement of the materials on the pile. We work quietly, stacking and balancing, until the detritus from the storage space has been rearranged. We then methodically take the pile apart and relocate it back to its pre-landfill purgatory. We end the recording.

Later, we work with Steve DiPaola to use DenseCap, an early AI-based machine vision system that uses a neural network language model to generate language sequences from images (Johnson et al., 2015), to see what the system senses from the documentation of our performance. To our surprise and amusement, the system recognizes all manner of things and relations in our entanglements of trash, chairs, and our bodies:

People standing on a sidewalk
The floor is made of wood
A man with a beard
A black and white photograph
Two people in a boat

And a frequent refrain: *white clouds in blue sky.*
White clouds in blue sky, again and again. Why?

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Figure 21.1 AI-generated image from "*White Clouds in Blue Sky*," 2021. Kate Hennessy, Trudi Lynn Smith, and Steve DiPaola.

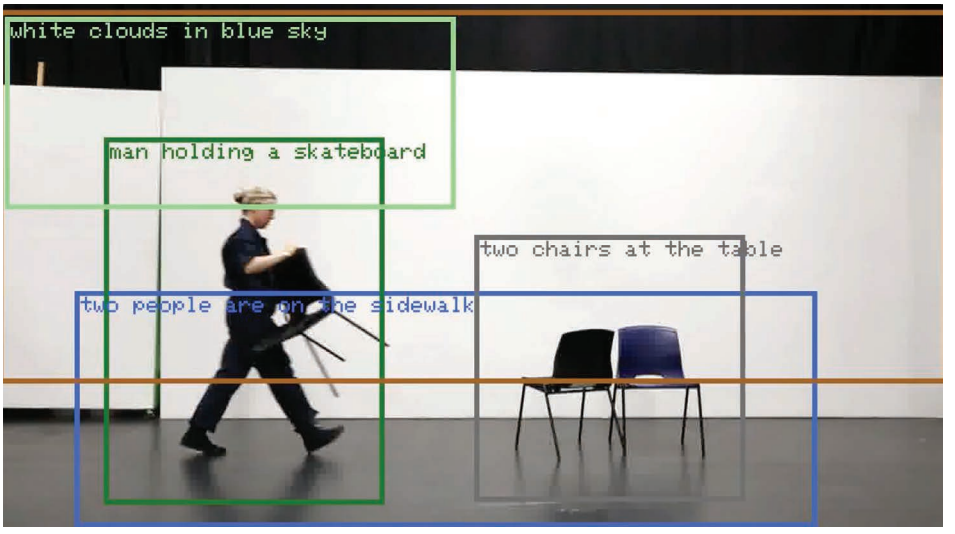

Figure 21.2 Video still detail, "*White Clouds in Blue Sky*," 2021. Kate Hennessy, Trudi Lynn Smith, and Steve DiPaola.

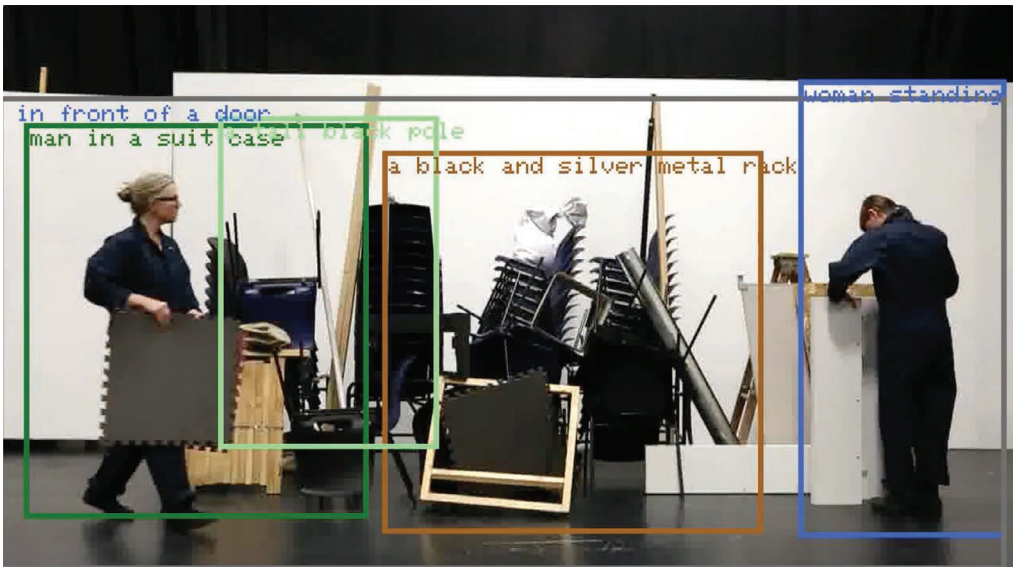

Figure 21.3 Video still detail, "*White Clouds in Blue* Sky", 2021. Kate Hennessy, Trudi Lynn Smith, and Steve DiPaola.

In this chapter, we describe the large-scale video projection artwork that we eventually created from this first video recording, titled *White Clouds in Blue Sky* (Hennessy et al., 2021). Through the lens of this work, we consider how our use of AI systems as sensing tools for this project led us to our critical engagement with *the cloud*—as metaphor, as image, as ubiquitous and resource-hungry. It leads us toward a less foggy vision of the cloud not a mute infrastructure, not a single virtual object or symbol (Hu, 2016), but as a deeply sensory phenomenon, entangled with human labor and intuition (Monserrate, 2022). Somehow our pile of virtual reality detritus and our experiment with machine vision brought us to a view of the so-called cloud as an infrastructure that cannot function without rivers and rain, wires and rare earth minerals, massive amounts of electricity, or landfills. We position *White Clouds in Blue Sky* as an extension of our sensory research-creation work with fugitive archival collections (Hennessy & Smith, 2018) and the material politics of anthropological documentation (Smith & Hennessy, 2020). Improvisation and collaboration are deeply relational and sensory modes for art-making and ethnography. Here we extend our emergent practice as artist–anthropologists to generative interaction with AI systems as a method for *sensing the cloud*.

Research-creation as sensory anthropology

Anthropologists have long been preoccupied with making sense of systems, dynamics, and relations that cannot possibly be seen in their totalities: from kinship diagrams to film, photography, sound recording, and data visualization. What we now think of as multimodal tools—from pencils to cameras to laptops—continue to be used as precursors to and beyond textual interpretation to represent broad complex relationalities. In this chapter, we situate our artwork *white clouds in blue sky* as a work of sensory multimodal anthropology that uses

research-creation as a method: art-based, art-led, or practice-based research that hybridizes artistic and scholarly methodologies and legitimates hybrid outputs (Loveless, 2020). As Natalie Loveless has defined it: "rather than uncritically adding one disciplinary apparatus to another, research-creation marshals new methods that allow us to tell new stories, stories that demand new research literacies and outputs" (2015, p. 53). For Stephanie Springgay, research-creation "has become a question of how to work ethically and in intimate relation with diverse publics" (2022, p. 3), where research-creation theorizing and practice provides a way into confronting and challenging historical and ongoing unequal and violent relations and abuses of power. A preoccupation for us working in this age of the multimodal in anthropology is the extent to which our use—even with a critical intention—simply reproduces these relations of power with their ecological and human toll.

Extending from anthropology's engagement with the multimodal and productive interdisciplinary encounters between anthropology and art (Schneider & Wright, 2013; Schneider & Pasqualino, 2014; Takaragawa et al., 2019), we tangle with the possibilities for creative representation of complex systems as an emergent method for making sense of one the most confounding dynamic entities in the contemporary moment: artificial intelligence. We owe a debt in our thinking about this work to Kate Crawford and Vladan Joler's exploded schematic drawing and essay Anatomy of AI System (2019), which takes a simple Alexa voice command to turn off a light as the starting point for a deep dive into the vast and incomprehensible web of human and non-human resources required to support the work of the Amazon Echo. Their essay and diagram[1] are centered around three extractive processes that are required for this now quotidian act with an unimaginably complex substructure—material resources, human labor, and data. The work is remarkable and instructive as we fumble toward an understanding of AI-supported anthropological mediality that is structural, political, economic, environmental, and cultural, the scale and function and impact of which are virtually impossible to see.

We argue that anthropologists working within a paradigm in anthropology that is generally today classified as multimodal (Collins et al., 2017; Westmoreland, 2022) are deeply implicated in these vast sociotechnical systems. Calling for greater reflexivity around new technologies and reproduction of inequality and environmental degradation (Astacio et al., 2021; Takaragawa et al., 2019), we offer this research-creation work as a methodological approach to sensory anthropology that is generative and foregrounds attention to materiality and its political, cultural, and environmental relationships. In particular, we situate our sensory research-creation practice as one way into an anthropology *of* the multimodal that

1 engages with the materiality of ethnographic research: its tools, its preservation structures (including memory institutions and their ideological foundations), and its media;
2 acknowledges the fugitive nature of documentary tools and everything that anthropologists document and collect;
3 is concerned with power and its manifestations in the material, including political economies of technologies and the role of humans in the reproduction of power structures through the design and use of technologies;
4 can include speculative art and research-creation practices to generate and communicate anthropological theory and knowledge (Smith & Hennessy, 2020, p. 129).

This four-point speculation for of an anthropology of the multimodal emerged through our (Smith and Hennessy) own process of research-creation as anthropologists and as

curators, including as a part of the Ethnographic Terminalia Collective, which organized exhibitions across the United States and Canada between 2009 and 2019 (Boyer, 2011; Errington, 2012; Scott, 2014; Smith et al., 2021; Stoller, 2015). In the remainder of this chapter, we will describe the research-creation process that took shape through our collaborations and became the foundation for *White Clouds in Blue Sky*. This included a deep curiosity about the material and power politics of the archive and the anarchive, and the sensory skills of archivists and conservators; a commitment to collaborative work and the nurturing of friendship in art-making and research; and, being open to (and making space for) improvisation in the research-creation process as generative and significant. We offer these experiments with methods for an anthropology of the multimodal that is sensory and relational, and which led us to an engagement with artificial intelligence as a deeply sensory human and non-human entanglement in *the cloud*. Through this work, we ask: Can a sensory anthropology of the multimodal be one of the ways through which we come to understand anthropological mediality in this new age of artificial intelligence and media making? How might a future anthropology of the multimodal oriented toward the sensory draw attention to the materials, infrastructures, information, and human agents that underpin contemporary mediality, in order to counter, rather than reproduce their dynamics of extraction and exploitation?

Fugitives: anarchival materiality in archives

"Fugitives," a sensory research-creation approach to an anthropology *of* the multimodal, began for us (Hennessy & Smith) in the British Columbia Provincial Archives in 2017. We worked with archivist Ann Ten Cate to identify, learn about, and visualize the archive as including *anarchival materiality*: a prevailing force in archives of unstablity, ongoing transformations, and resource-intensive interventions that works against an archival imagination that sees records are durable and stable (Smith & Hennessy, 2018).

Hal Foster, focusing on contemporary artworlds in the 1990s, proposed the "anarchival impulse" as focused on the energy of wildness, the thwarted, the "unfulfilled," and "obscure traces" of archives as a starting place for artworks (2004, p. 5). Philosopher and artist Erin Manning (2016) describes an anarchival impulse in archives as an ever-present force that exceeds but needs the archive. Archives are both enduring and surprising, always tending toward and away from human order: a deeply sensorial and lively materiality, including the smell and taste of images returning to elemental messiness and the awareness in caretakers of the complexity of instability.

As we walked around the archive, Ann Ten Cate used the term *fugitives* to describe records and objects that cannot be preserved because of their inevitable material changes, technological obsolescence, or other changes in classification and worth (Smith & Hennessy, 2020). It is a force that is always altering archives, for example, from indexical records (e.g., significant family photographs) into pungent hunks of glass plates fused with the sticky interleaving of cellulose nitrate negatives. It is a force archivists and conservators are deeply attuned to, using their intuition and embodied experience of caretaking, maintaining, and deaccessioning collections. It is a force entangled with the drive to digitization, where budgetary pressures and material entropy drive movements to create digital records while disposing of fugitive originals and responsibility for conservation. All of these dynamics are at play in the analogue archive, tying it inextricably to contemporary cloud infrastructures and ecologies.

Central to our sensory research-creation was constructing a temporary studio in one of the reference rooms as a place for documentation and conversation. As we learned about the fugitive nature of documentary tools, we documented how anarchival materiality is a force at play in all archives. Over the course of two days, the humans who care for, maintain, and dispose of archival records—archivists, technicians, conservators—flowed through, generously collaborative in delivering records and sharing stories. We learned that archivists and conservators approach the archive as full of unexpected and expected transformations. These transformations are often happening below everyday human perception, and in relationship with a very complex wider ecology (e.g., humidity or heat or the work of multiple atomic arrangements at play). Their work of sensing the destabilizing force in records draws on a way of being in the world that is attuned to archival instability through multiple senses: smell (e.g., in "vinegar syndrome"), touch (e.g., the gooeyness of nitrate negatives), and sight (e.g., the magenta cast of color motion picture films). These destabilizations change the story and meaning of the records.

Proximal Interactions and *Paper Burn*: a sensory method

Making sense of the materials and objects we encountered in the archive was for us a process of intuitive exploration and documentation. Following Manning's (Loveless & Manning, 2020, p. 214) characterization of research-creation as "how practice knows differently," we worked to create new relationships between archival records guided by their own materiality (material tendencies), aesthetic qualities, and our own sensory experience of them. This resulted in works including *Proximal Interactions* (video) and *Paper Burn* (photograph, diptych).

Proximal Interactions (4¢37²) is a two-channel video we filmed in the temporary studio. In the video, our gloved hands position and reposition images on a light table. The group of images was selected in consultation with conservators as they form part of a collection that is used to help archives workers identify image deterioration. The video documents our hands as we try to work out a new order for things in an archive no longer meaningful as

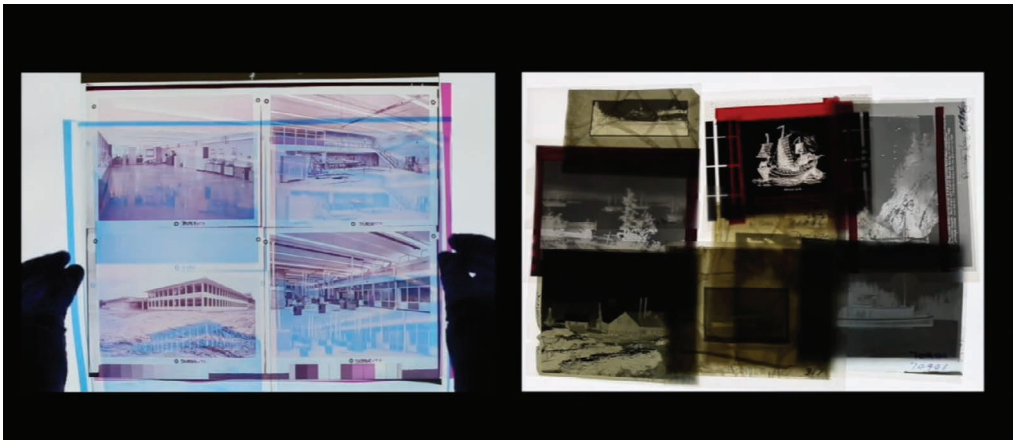

Figure 21.4 Video still, *Proximal Interactions*. Trudi Lynn Smith and Kate Hennessy (2017).

indexical images. Each channel was recorded in a single take, documenting our uncertainty and emergent aesthetic classification for the archive, as artistic work. In one channel, we layer a four-color separation, attempting to line it up perfectly and create a full color image. Our layering references the ephemerality of color in photographic records. In the other channel, we experiment with a new order for a set of silver-based images, building a new image from the work of orienting ourselves around the formal elements of ruby lith, a red masking material that hides unwanted information, used in orthochromatic photographic printing, that by intent is not visible in a print of an image. Its presence in our video plays with presence and absence in archives and archival documents and the openness of archives to change in meaning.

Our improvisational practice is grounded in sensory engagement: new stories arise through our sensing of the gooeyness of cellulose nitrate negatives and ruby lith stripes. The video acknowledges and visualizes both our improvisation and our response to the agency of anarchival materiality where the structure and intent of human-made archives are challenged by the lively anarchy of the materials themselves. Research-creation practices in anthropology can bring these dynamics into view.

A second work created in that temporary studio, *Paper Burn*, is a series of photographic images documenting the radical changes in paper documents over time. Paper is a common and essential material of analogue archives: the substrate for text, the interleaving between records, and the backing on picture frames. Paper burn is an effect of movement and change over time within the paper itself. The signs of paper burn are visible changes of atomic restructuring or rearrangements within a piece of paper—dark spots, edges, and lines—that appear over time from internal conditions such as acids in the paper, or external, environmental factors such as light and heat (Balloffet & Hille 2005; Carter 1996). In a stack of paper, a burn may start on one page and skip pages before starting again. New shapes, spots, and lines, obscuring and creating misreadings of the original intent of the document, became our starting point for the artwork. We considered these new shapes, spots, and lines as invitations into collaborative improvisation, new relational representations manifesting in temporary arrangements that we documented to create a photographic series (Figure 21.5). What was once a collection of deteriorating paper became an evocative assemblage as we worked together with lines and textures toward articulating our emerging understanding of anarchival materiality.

White Clouds in Blue Sky: Surrey urban screen, 2021

White Clouds in Blue Sky emerged from this improvisational collaborative sensory practice. When we encountered the detritus of the virtual reality exhibition at the Center for Digital Media (CDM) in Vancouver, we were inspired to extend our practice to a larger scale and curious, through our collaboration with Steve DiPaola, to investigate how machine vision in its capacity at that moment in time might sense and interpret the assemblages we created. As we had done at the BC Provincial Archive, we created a temporary studio space in the CDM's "Hangar" and began the improvisational process that we describe in the introduction to this chapter.

The completed work premiered in 2021 as a public artwork at the Surrey Art Gallery's UrbanScreen with the screening program *Body as Border* (Aceves-Sepulveda et al., 2021). It is a three-channel video installation that ultimately juxtaposes our performative engagement with the materiality of exhibition refuse with the poetics and politics of

Figure 21.5 Installation detail, *Paper Burn*, Kate Hennessy and Trudi Lynn Smith (2017). *Fugitives in the Archive*, Royal British Columbia Museum, 2018–2019.

Figure 21.6 Video still, "*White Clouds in Blue Sky*," 2021. Kate Hennessy, Trudi Lynn Smith, and Steve DiPaola.

machine vision. In the left channel, the video shows us methodically and improvisationally constructing the sculptural heap of utilitarian objects like stacks of chairs and scrap materials that have been gathered after an exhibition and are destined for the landfill. As we work, each frame of the video is captioned using DenseCap machine vision and description system (Johnson et al., 2015). This neural-network language model draws multicolored bounding boxes around sections of each frame as the system identifies patterns and affinities with images in its dataset and offers textual interpretations. This sensing system rapidly searches, boxes, and articulates its recognition of patterns as we move on and off the screen and create new arrangements in the growing stack of objects and refuse.

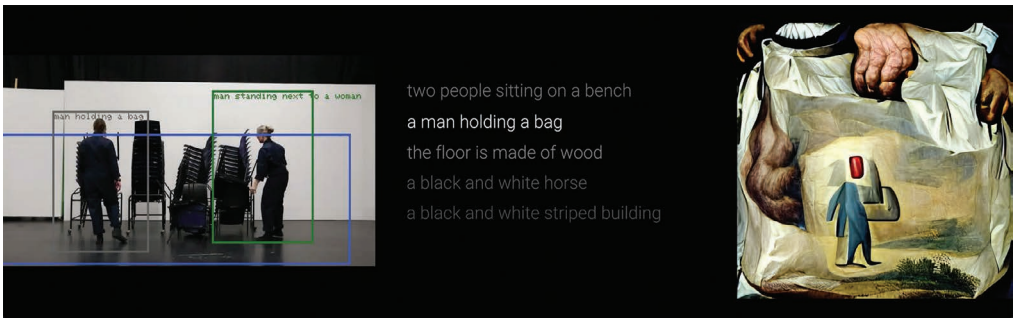
man holding a bag
man standing next to a woman
two people sitting on a bench
a man holding a bag
the floor is made of wood
a black and white horse
a black and white striped building

Figure 21.7 Video still, "*White Clouds in Blue Sky*, 2021. Kate Hennessy, Trudi Lynn Smith, and Steve DiPaola.

The second central channel is a scrolling poem that we extracted and assembled from the DenseCap-generated phrases, which consistently misrepresent the concrete reality of our performative actions and pile of stuff. The abstract shapes created by our moving bodies and the materials confound the system (see Martineau, 2019), and its interpretations become textual waste of a new kind. While DenseCap is an early AI system with a relatively small dataset (one that can be hosted on a single personal computer), its complexity is in its ability to recognize a scene and to describe it. Its neural network is trained on the Visual Genome dataset (Krishna et al., 2016) which is human-labeled and enables scene-level information, specific objects or parts, and background regions. Traces of this human-described dataset are remediated as descriptive phrases. As this text scrolls down the central screen, a single line is highlighted for three seconds; it is coordinated with the third video channel where an image that has been generated with AI systems using that line as a text prompt comes into view. As the poem scrolls down, a new phrase is highlighted and its corresponding image appears, all the while new assemblages are being created and identified by the system in the first channel.

A man holding a bag
The floor is made of wood
The man is on a skateboard
A man holding a camera
White clouds in blue sky

These uncanny AI-generated images were created by Steve DiPaola and PhD student Amineh Ahmadi Nejad using two AI tools that represented the bleeding edge of AI image generation at the time (2021) that this work was created: VQ-GAN+ CLIP (Crowson, 2021) and DALL.E (Ramesh et al., 2021). Generative adversarial networks (GANs) are artificial neural network models that generate images from a random input vector (Goodfellow et al., 2014). GANs consist of two separate networks, generator, and discriminator, with the objective of generating an image and scoring the quality of the generated images respectively. The generator network G takes a latent variable z from distribution Pz (namely latent space) and generates an image which is then passed to the discriminator network D to be judged if it is fake or real. Once both of the networks have been trained, the generator can be used separately to generate images that are close to the training dataset.

Figure 21.8 AI-generated images. *A man holding a camera*; *the floor is made of wood*; *a kitchen scene*, in *White Clouds in Blue Sky*, 2021. Kate Hennessy, Trudi Lynn Smith, and Steve DiPaola.

Contrastive Language—Image Pre-training (CLIP), introduced by OpenAI in 2021, is a transformer-based neural network model for assigning image and text snippet pairs together (Radford et al., 2021). It includes a trained text encoder, as well as an image encoder that takes N pairs of text snippets and images and pre-trains by maximizing correct pairs values and minimizing others. An identifying feature of CLIP is its massive training dataset (400 million image-text pairs), which yields high performance in zero-shot label prediction of images, meaning the network can achieve high-accuracy results on a test dataset that it has not seen before. CLIP can be used as the discriminator of GANs to generate images from text descriptions. DALL.E, a neural network trained to generate images from text descriptions is named after artist Salvador Dali and Pixar's sympathetic robot WALL-E, is trained on a massive dataset of 250-million image-text pairs.

To support the functioning of these systems, the internet is sourced as a massive archive of human and non-human activity, sensation, representation, and experience. Detached from context, read and interpreted by human laborers, and generated through algorithmic classification and remediation, images and descriptions are subjected to deeply sensory human and non-human processes that transform these media into something new. On a massive scale, considered through the lens of fugitivity and anarchival materiality, algorithms and neural networks juxtapose image and text to create new relational representations of the world. While we can read about and try to understand the socio-technical apparatus that makes these transformations possible, our first experiences of making these images have been: wonder, laughter, astonishment. Why these interpretations? From where did they arrive, and how can this mysterious machine see white clouds and blue sky, again and again? What feels like a message from an overheating, earth-wrecking ghost in the cloud is more accurately a tendency toward what Alexander Campolo and Kate Crawford (2020) call *enchanted determinism*, or

> a discourse that presents deep learning techniques as magical, outside the scope of present scientific knowledge, yet also deterministic, in that deep learning systems can nonetheless detect patterns that give unprecedented access to people's identities, emotions and social character. These systems become deterministic when they are deployed unilaterally in critical social areas, from healthcare to the criminal justice system,

> creating ever more granular distinctions, relations, and hierarchies that are outside of political or civic processes, with consequences that even their designers may not fully understand or control.
>
> *(p. 3)*

White clouds in blue sky represents possibilities for research-creation toward an anthropology of the multimodal that is focused on the broader politics of multimodal tools. Our goal is to somehow resist the deterministic enchantment of the new, and to use the very tools and technologies that we aim to critique. Is it even possible? We present this work as an ambivalent contribution to a critical practice of sensory ethnography that interrogates and explores the material and discursive implications of new technologies for the generation of anthropological knowledge and human experience (Astacio et al., 2021; Takaragawa et al., 2019). By juxtaposing our sensory engagement with VR exhibition detritus, the emergent poetic texts generated by machine vision systems, and AI-generated images that are the culmination of our actions and the massive image and description-based training sets drawn from the internet, we highlight tensions between individual human structures of memory and imagination and contemporary computational image recognition systems that are increasingly functioning as sensing interlocutors for humans, public institutions, and corporations.

As we assembled the three video channels (with the support of video editor J. Tseng), moving through our own experience of the work from amused enchantment to deep discomfort, we began to see parallels between the planetary proliferation of material waste, the proliferation of digital imagery being mobilized in artificial intelligence data training sets, and the energy resources required and wasted to power these interactions. By drawing attention to current limitations of machine vision in recognizing and describing objects, the work points to significant possibilities and problems as humans and machines increasingly mutually constitute, reinforce, and rewrite classifications and meanings of things. How will machines sense the archive of human and non-human experience in the future, and what stories will be told about them? What stories will humans be able to tell and imagine in the future, in relation to new intelligent sensing machines? What kind of planet will we inhabit? Will the skies be blue? Will the clouds be white? These questions, found through a collaborative process of research-creation, are for us an emergent exploration of an anthropology of the multimodal that is deeply engaged with the political economy of new technologies. Importantly, as we discuss in our conclusion, this work led us to a deeper exploration of the material, environmental, cultural, energy, and colonial politics of artificial intelligence and its power to name things and create representations of the world.

Sensing the cloud

Our ending point for *white clouds in blue sky*—greater awareness of the sensory socio-technical apparatus of AI and the cloud—will come as no surprise to anthropologists working in the context of Science and Technology Studies. As anthropologist Shannon Mattern has written, the cloud

> forms sovereignty and governance; energy flows and rare earth minerals; cables, data centers, and supply chains; and operational technologies through gross profusions of data. Whether we understand these technologies is beside the point. This is a Cloud—a nebulous conflation of information, capital, and geography—that enshrouds all.
>
> *(Mattern, 2016, p. 2)*

Mattern's words paint a vivid image of the ubiquity of cloud-based computing and artificial intelligence, as does Crawford and Joler's graphic *Anatomy of an AI System* (2018). More recently, the crucial human experience of the cloud is brought into clearer view through "cloud anthropologist" Steven Gonzalez Monserratte's descriptive ethnography and digitally rendered field images. His work provides a deeply sensory picture of the enabling properties of materials for cloud computing and the workplace cultures and practices of technicians inside the usually hidden spaces of server farms. In doing so, he shows how the cloud is not a mute infrastructure, not a single virtual object or symbol (Hu, 2016), and not fully automated and hyperrational; rather, it is a "factory-library" where the maintenance and ongoing function of the cloud is cut through with emotion, instinct, and human judgment. In a mode that resonates with our (Hennessy and Smith's) sensory ethnographic explorations with archivists and conservators in the BC Provincial Archive, Monserratte follows a server technician in the central United States as they assess and trace overheating servers and air flows not relying on data or flashing lights or alarm bells alone, but the embodied experience of the feeling of hot and cold air, the sound of roaring air conditioners and the smell of overheating machines. To be able to understand the mediality of the cloud in its dispositional properties and powers (Verstegen, 2014), Monserratte argues:

> [W]e must unravel the coils of coaxial cables, fibre optic tubes, cellular towers, air conditioners, power distribution units, transformers, water pipes, computer servers, and more. We must attend to its material flows of electricity, water, air, heat, metals, minerals, and rare earth elements that undergird our digital lives. In this way, the Cloud is not only material, but is also an ecological force.
>
> *(Monserrate, 2022, p. 4)*

Like our research-creation practice in the BC Provincial Archives, our work with AI and the cloud draws our awareness to the complexity of archival ecologies. Anarchival materiality reveals that all archives and their stories are a story of records as needing energy and resources in order to persist; rather than living outside of time and space (an imagined order of archives, of the stories they hold), they require a steady supply of human labor, land, water, and air. For example, hydroelectric dams power freezers to slow down the inevitable degradation of material records as well as digitization projects that virtually all archives participate in. The cloud, like all archives, is also embedded in real ecological human and nonhuman worlds, where massive energy consumption is required to support the functioning of AI computational processing in the cloud, draining the hydrosphere through its rapacious water use and exposing human workers to a traumatic media environment. A recent news story exposed how Google's Oregon data centers used 335 million gallons of water in 2022, a number that has tripled since 2017 (DCD, 2023). To put this in perspective, the amount equals more than one-quarter of the annual water use from The Dalles city, where the data centers are housed. Especially concerning is that the city administration, with funding from Google, attempted to block a public records request by a local news source.

In other parts of AI infrastructures, people face unjust, violent, and traumatizing work conditions. A recent *Time* article, for example, reveals that OpenAI (like Facebook) must train datasets toward safety (for some) (Zorthian, 2023). OpenAI worked with a Kenyan company who paid workers under US$2 per hour to remove toxic information from the datasets by creating training sets (Zorthian, 2023). The workers sense and interpret and create the sets filled with descriptions of violence and harm. As we worked through research-creation

toward an anthropology of the multimodal, the AI-supported affect of surprise and delight was met with the felt anxiety of knowing some of the human and more-than-human ecologies at stake, tensions that we have aimed to describe.

Conclusion

In this chapter, we have explored experiments in sensory research-creation work focused on the broader politics of multimodal tools. We describe how we have extended our improvisational and collaborative art-making and ethnographic work to the use of artificial intelligence-based image and poetry creation to create the large-scale video projection *white clouds in blue sky* (Hennessy et al., 2021). Our research-creation experimentation gave us insight into the contrary dynamics through which AI systems and cloud computing are presented as singular, neutral, automatic, and clean (Hu, 2016) and yet, like other archives, are animated by a deeply sensory *anarchival materiality*. Aiming to both identify and counter a tendency toward black-boxed *enchanted determinism* (Campolo & Crawford, 2020), we describe our process of working with analogue and digital archives and media that are at once complex and unstable, knowable and agential, and producing sensorial rich visible and invisible worldings.

Experimental sensory research-creation led us to ask: Can a sensory anthropology of the multimodal be one of the ways through which we come to understand anthropological mediality in this new age of artificial intelligence and media making? How might a future anthropology of the multimodal consider these tensions and further draw attention to the materials, infrastructures, information, and human agents that underpin contemporary mediality so that we might counter rather than reproduce these dynamics of extraction and exploitation?

As we conclude the collaborative writing of this chapter in a Google Doc on an overcast day in January, we remain intrigued by the AI reading of our pile of detritus as *White Clouds in Blue Sky:* Is it an invitation, or is it a warning from the cloud, telling us to *go outside! Look up! Watch out! White clouds in blue sky. White clouds in blue sky. White clouds in blue sky.* Why?

Note

1 See https://anatomyof.ai/

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22

BEYOND THE HUMAN

A sensory ethnographer's gaze on sportfishing practice

Vesa Markuksela

Sensory ethnographic scholarship and practice is rooted in producing accounts that engage with the senses and emphasize the importance of (human) sensory experiences, which are culturally and socially produced. For instance, studies have applied the researcher's own experiences and embodied sensation to gain insight into the lived relationships between people and places (Drysdale & Wong, 2019). Much of this research is inspired by phenomenological approaches that privilege the study of experience. In the practice-based approach to sensory ethnography (e.g., Valtonen et al., 2010; Markuksela, 2013), experience is not the primary way of knowing the social world. The practice-based approach directs epistemic attention to practices instead of individual experiences. It accounts for how the senses play a part in coordinated practice and subsequent interaction with the social and material world. The perspective devotes attention to the actual emplaced performance of the embodied activity's "doings and sayings" (Markuksela, 2013; Markuksela & Valtonen, 2019). More importantly, it embraces not only human actants but also the actions of non-human material elements.

The practice-based approach foregrounds the importance of the body, the senses, and mobility. Through sensing and moving one's body, the world and its materiality are performed. The senses are therefore embedded in situated action and intertwined in performance (Valtonen et al., 2010). The outline of this approach converges with the ideas of more-than-representational (e.g., Lorimer, 2005) and non-representational ethnography (Vannini, 2015). These modes of inquiry share, for example, an understanding of the importance of embodiment, practice, and performativity as co-constitutive elements of action. This approach therefore emphasizes that composing action happens in affective and multisensory material encounters and entanglements with more-than-humans (e.g., Bennett, 2010), rejecting the illusion of human mastery. Instead, it draws attention to the more-than-human, such as animals, materials, the environment, and forces of nature, asking how we interact, intermingle, and entangle with non-human others in a shared environment.

In this chapter, I exemplify this approach through an analysis of trolling, a significant sportfishing technique in Nordic inland waters. Fishing by trolling consists of dragging 1–12 lines, baited with lures, behind a moving boat. The lures are dragged at varying speeds and depths according to the nature, habitat, and species of the fish. Trolling is done with the help

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of a small- to medium-sized motorboat (13–21 feet long) that carries a crew of between two and four anglers. Anglers actively (re-)work fishing lines up and down with a rod and paired reel. Along with fishing, the crew members have tasks associated with the act of boating. The enactment of trolling thus engulfs and amalgamates two activities.

Trolling happens above and below the surface of a water environment. On the surface, the moving and moved anglers meet the fluctuating nature of water—angry waves or gusty winds—while the trolling itself is simultaneously interconnected with the unseen, active underwater world. In this communion, anglers directly and indirectly (through technology) encounter many species of fish and other non-human actors, such as flora (e.g., through the unwanted touch of benthic plants or snags). On both sides of the surface, the human and non-human worlds interact and engage through a myriad of senses.

I base my case upon a three-year, multi-sited ethnographic fieldwork project in Finnish Lapland. The research material is derived from my participation in 22 trolling day trips, each taking between eight and 24 hours. They unfolded in different lakes and rivers at or above the polar circle. Each season lasted from June to late September, and a spectrum of Lappish weather—from heat to sleet—was thus experienced. The study follows my 25-year-long leisure career—in a sense, I never clearly entered, nor have I ever left the field.

Following each fishing trip, I wrote memoirs, unintentionally revisiting, and rethinking past events through the sifter of theory. While conducting fieldwork, I took part in trolling day trips as one angler among others, either in my boat or as a crewmember in other trolling motorboats. I immersed my body in the trolling activities, allowing me to make participant observations from the inside as they happened. Material was generated via observation (e.g., written headnotes, field notes, diaries), informal discussions on the water and onshore with other anglers, visual materials (e.g., photos, video clips), and autobiographical stories.

During and after conducting the fieldwork, I wrote mental "headnotes" and elaborated autoethnographic narratives that combined my experiences with and observations of human and non-human others, discussing and reflecting on them. Into these narratives, I am able to integrate my understandings of my observations of others (Ogden et al., 2013). They form the nitty-gritty of a grand narrative.

What follows offers a case study demonstrating how to improve present understandings of nature-based more-than-human relations. The practice-based approach to sensory ethnography reveals that trolling enactment is constantly woven together with bodies that are not human. It illustrates that these non-human bodies have the potential to be agentic carriers of practice and are indeed an intrinsic part of the social world. The activity of trolling, per se, can be seen as a conglomeration of practice elements: anglers, fish, the water body, and the weather. Distinct in this relation is the rhythmic movement across these bodies as they come together with events. The attention paid here to the mobile episodes of intra-action reveals the interchanges and interconnections that take place between various bodily natures, noticing how senses are embedded in practice and performance. The focus illustrates how multi-sensoriality, mobility, and rhythm play out—how performance takes shape in bodily positions, fleeting routines, embodied movements, affective intensities, and unexceptional happenings.

Sensuous surface ethnography

> We are sailing down the water at the pace of a brisk walk. The water seems to be rising to meet us with the whitecaps. We have entered the aquatic zone of action. Our boat

rises and falls heavily along the waves, which are splashing up spray and drumming on the exterior of the vessel.

I'm at the stern, about to orient the sounder-transducer parallel with the waterline. The transducer is on the port side of the downward swing of the propeller. I roll my sleeves up and press my forearm down through the water's surface, submerging it up to my elbow.

My seeking fingers fumble along the aluminium hull. There you are! The transducer is between my thumb and forefinger. A teeny-tiny bend of the wrist . . . Ready? Steady, co . . . mpleted! I pull my arm up from the coldness. Water drops run along my skin and underneath my shirt—under my skin. Whistling cold wind finds time to cling to the wetness.

(Field work, July 17, Lake Inari)

Trolling practice is being on bodies of water and "doing" the water. It is also inhaling, sniffing, and sighing the water, being strikingly mesmerized by the water's surface and intrigued by the secrets of the waves. Even the easiest chores provide an abundant sensorium. In trolling, the performance of mobility is essential. Anglers are constantly on the move. For example, they are "moved" from one fishing ground to another by the motorboat. The transported angler, however, is not a mere passenger.

The trolling crew must carry out specific tasks—handle the fishing gear, maneuver the boat, and keep a close watch on the changing environment. They are also constantly controlling and adjusting their bodily techniques in rough water, receiving and sending kinesthetic messages to other crewmembers' bodies. The performance requires individual skills alongside the ability to function collectively. To adjust to and integrate into various bodily elements, the crew brings them together and becomes part of them at the right time and place. Mastery of bodily techniques and orchestration of the senses is thus a prerequisite for fishing performance.

Safe navigation and actual fishing are shaped by the non-human materiality of the water and the weather (Markuksela, 2013). This "dynamic duo" can enable, constrain, and redirect human practices, thereby shaping the available forms of coexistence and action (Rantala et al., 2011). Smooth trolling requires adaptation to the prevalent waterscape conditions while still being alert to potential rhythmic changes. Hence, a competent performance begins with preparation and planning for upcoming changes in the character of the water. Anglers anticipate the future waves through the weather. They aim to foresee the weather and to become more "water-wise." In issuing predictions, the anglers try, for example, to interpret the "sensorial cues" of nature and attach them to shared practice-knowledge and the available weather forecasts:

I feel instantly the coolness of the air and the odour of incipient autumn. I also hear the gentle rustle of leaves. I lick the tip of my index finger. With my eyes shut, I point the finger upwards and rotate it slowly in different orientations. There! My moist finger, the embodied weathervane, locates the "coolest" direction. Yup, the wind blows from the south. Hmm . . . a light breeze, perhaps four to five miles per hour . . . partly cloudy, but no rain clouds.

(Field work, August 14, Lake Porttipahta)

The prepared, "water-wise" anglers can make educated guesses about the types of waves they could encounter—they weather the storm. The crew discusses their choices for action: Is it

safe to fish? How's the weather for fish(ing)? In this weathering (Vannini et al., 2012) procedure, the crew aims to knit from scratch a shared understanding that helps in wayfinding and selecting the best practices. For example, competent anglers consider the wind and other weather conditions in their practice performance; anglers tend to fish downwind, where the waves push against the banks, creating water pressure that rouses the fish. The small fish ride, and the predator fish follow after them, tailwind waves heading ashore and remaining stationed. Besides surface concerns, anglers must plan and cope with the underwater weather that conditions the fish, considering variables such as the water temperature and currents. After doing so, anglers can ponder fishing strategies. For example, how should the lures be tuned to swim, and how deep?

Trolling performance can be planned only with limited foresight. Arctic summer waters are a setting where abruptness, inconsistency, and instability encounter each other and intertwine. At any given moment, an unforeseen occurrence may introduce itself, and the surrounding waterscape can appear in a completely different constellation. For instance, a sudden change in the wind can alter the character of the water in a flash, shifting conditions from calm to stormy. Even the most skillful anglers can be surprised by a gust and a high wave's unexpected rhythm:

> The wind is getting tense; it whistles in my ears, and at the same time it blows more forcefully against my face. . . . Instantly, the waves grow taller . . . the boat drops into the trough—the stern lifts. The bow nearly buries itself in the opposing wall of water. I am no longer on a boat but embarking on a heaving rollercoaster. A sudden angry wave pushes hard, exerting high pressure from portside—a transverse thrust. I turn the rudder, trying to compensate for the prod. D'oh! The boat swings in the direction opposite the one I expected. . . . It seems like the waves have mesmerised the boat. . . . I'm losing grip . . . on the water.
>
> *(Field work, September 13, lake Kitka)*

The angler's relation to the waters is twofold. On the one hand, the relationship can be daunting and hostile—a fatal attraction. On the other hand, it is an active companionship that provides well-being. In both cases, the anglers and the water respond mutually to one another, for better or worse.

The latter, unplanned and unwanted course may feel obnoxious. At those times, anglers are vulnerable, unprotected from the converging hits of fierce waves that rupture the order of performance rhythm. The "surfacing," rhythm-breaking waves arouse affects. The rough waves are absorbed in and attached to feelings—raging and angry. A fissuring rhythmic encounter with rough water may cause an affective miasmatic mood—vacillation. At worst, it becomes an abysmal state that elicits the bodily dimension of malaise and dread. Paradoxically, the murmuring waves can be also productive. They may bring along a sense of change, meeting in a harmony that abolishes the radiating despair from the wavelets of the mind. For a fleeting moment, anglers might even identify themselves with the voluptuous waves and water body, getting a feel for becoming an extension of their agency, becoming part of the waves, being water. This interconnectedness combined with the force of the waves creates a new enlightened mindset—anglers are "watered."

Coming to know water, however, requires the continuous relearning of and getting familiar with water-space. With the thorough rehearsing and routinization of weather and water knowledge practices, anglers can develop watercraft and eventually water-wisdom—that is,

the ability to read the waves and the skills to perform water and be on it. This kind of learning paves the way to a widened understanding of water and provides a prospective account that, in the telling, moves us this way and that through the terrain of water.

The anglers' (un)planned trolling performance rests on their appropriate use of the senses. They also make sense of the waterscape's affective twists and turns through the sensuous. Especially in unforeseen, disordering times, human sensations and processes light up (Merchant, 2011). At these moments, a sporadic sense might override the others. For example, encounters with angry waves highlight the equilibrioception sense. The anglers are adjusting, keeping their balance on the rolling ride—they are getting their sea legs. However, in the middle of the action, their senses still operate in a continuous interplay. For example, when anglers strive to act steadily, they can simultaneously feel the murmur of angry waves or scent the approaching thunder. Interaction with various material technologies is a vital source of sensuous affordances. For example, a floatation suit can numb the skin to the touch of the weather. All in all, anglers must find a way through water with their sensations.

Sonar-o-graphy of the beneath

The cultural logic of trolling can be arranged into the following overlapping and iterative sequence: to locate, get familiar with, and, ultimately, connect with fish. Such simplified sequencing also provides a trajectory for multispecies underwater ethnography. The angler gazes beneath in each sequence, observing what is happening below the water. It is a must; Lappish lakes and rivers are usually murky, and the visibility depth is minuscule. Anglers won't see below the surface, and without help from a sounder, they will fly in blind. The sounder transgresses the impenetrable boundary of water. Unblindfolded anglers can dive deeper into alien waters, closely gazing at the sounder display to see aquatic practices from the inside—they are doing sonar-o-graphy.

This technological gazing is an underwater practice conducted on foot wherein the ethnographer observes and maps the waters at a strolling pace. In trolling, fish seldom emit scents or other indications on the surface that provide a sense of direction to the angler. To determine the location of the fish, one instead reads their living space—seeks a suitable bottom composition that calls for fish:

> I gaze at the large sounder display. A diverse and lively underwater landscape is revealed. The sounder outlines a drop-off sinking sharply into the abyss. The sounder adduces the changing features of the bottom of the lake. The display indicates the depth of the water and its various temperature layers. It also outlines many fish underneath, tempted by the place. There are large moving schools of small fish and, close to them, swarms of larger fish, presumably pikes—the catch we are looking for.
>
> *(Field work, August 3, river Kemijoki)*

The rule of thumb is to search for variety, something that breaks the monotony. The locator looks for anomalies in the structure of the bottom (e.g., ledges, drop-offs). Abnormal features along the bottom form a fish-holding area, making the space special for the fish. Abnormality entices life, breeds food chains, and provides places to hide.

> We have been crisscrossing this distinct area, waltzing various lures near the fish, wooing them and politely "requesting" that they take a bite. According to the sounder, the

> water temperature is 57.2°F. The pike love this kind of water and should be active—so why do the pike not strike? Why are they remaining still? I'm stupefied. Is it due to the weather?
>
> *(Field work, August 3, river Kemijoki)*

The monitoring allows the observer to see more clearly. However, a distant visual perception and a body of remote sensuous knowledge about the fish are not enough to make physical contact with a meaningful other. If the fish will not strike, the anglers' increased knowledge about the nearby fish increases their sorrow, inciting grief about the missed encounter between the above and underwater worlds' actors. To connect, the anglers' acumen must develop from remote to familiar and intimate. In doing so, the distanced sensory awareness must be combined with the angler's practice skills and deep knowledge of fish behavior and water habitats. This combination can be treated as an assemblage between the sounder and the bodies of the fisher, water, and fish: a producer of practices, imagination, and communication—of connective sensory wisdom.

To get familiar with the fish, it makes sense to become acquainted with "catch" species and, more broadly, with the underwater ecosystem. Anglers seek predator fish, those that prey upon other aquatic animals. Predator fish have a lifecycle of their own, as well as seasons of activity and diurnal rhythms. Anglers attempt to familiarize themselves with the habits of predator fish and their rhythmic patterns, learning their sensuous and self-imposed body language, growing intimate with and even themselves becoming predator fish. This becoming involves a multiplicity of past encounters, including conversations with other anglers (Bear & Eden, 2011) and paying vigorous attention to the world of fish.

Predator fish are in an affective relationship with the underwater ecosystem. For instance, the weather below the water (e.g., the water pressure and temperature) and other distinct, seasonal underwater features affect the behavior, movements, and whereabouts of the fish. For example, stationary hot temperatures above the water cumulate in the rising of the water temperature and pressure beneath. This circumstance is uncomfortable, causing predator fish to gravitate down to colder layers of water. In response, these fish grow inactive and reluctant to move around, and their feeding activity becomes low. They are said to have "lock-jaw" or be "changing their teeth." It is for this reason that anglers understand the dog days of summer to mean bad weather. Anglers must take the fish's perspective into account and reflect on how weather above the water mirrors the water beneath the surface and affects the sensuous practices of the fish. In doing so, the anglers try to alter their embodiment and senses to match those of the fish, meditating on what is best for the fish.

Anglers want to ensure contact with more familiar fish by appealing to all the senses of the fish. They want to "help" the fish to make sense: the better to see you with, the better to hear you with, and the better to eat you with! This reasoning underlies the creation of sensual stimulus bundles, whereby they bring their lures to the correct depth and hold them close enough to the fish. In doing so, the fish can see the colors, hear and feel the vibrations of the lure, which imitate the movements of their quarry, and smell alluring scents.

A practice-based approach to sensory ethnography

The ethnographic notes I have shared earlier draw upon practice theory and literature on mobility and on the body and senses. This form of practice theory is anti-individualistic, and therefore it directs its analytic attention to practices that organize and shape individual action

(Valtonen et al., 2010). This posthuman approach understands that social arrangements are put into motion and sustained through the active involvement of human and non-human material entities (e.g., Gherardi, 2019).

Practices, per se, are skillful performances drawn from a meaningful repertoire of bodily doings and sayings, as well as their accompanying sensations (Markuksela & Valtonen, 2019; Schatzki, 2011). Proficient performance is an assemblage of interconnected elements, such as mental activities, things, forms of understanding, know-how, and motivational knowledge (Reckwitz, 2017). Each time actors assemble and organize elements, they participate in the act of "practice-as-performance" (Hui, 2012), where practice carriers reproduce a routinized pattern of action. Trolling is thus understood as such a performed assemblage of practice.

Practice theory accounts explicitly or tacitly admit the embodied nature of practicing, conceiving of the body as a carrier of practice (e.g., Schatzki, 2011). Practice carriers acquire the embodied and sensuous proficiency and skills needed to take proper action through training. A fishing task, such as tiring or landing a fish, is something fishers do as part of their practice with their skilled bodies. Practices become, in turn, embodied once they are learned. In this sense, body and practice co-constitute each other in the embodiment of action. The body learns to act in a practice-specific way and, in doing so, maintains and reproduces the practice (Markuksela & Valtonen, 2019).

For example, the successful landing of a fish is collectively executed by competent agents oriented to each other. To accomplish it, anglers must communicate and adjust their own movements, considering those of the fellow fishermen sharing the vessel's relatively small inner spaces. Above all, they must synchronize their doings to the movement of fish. The cultural logic of practice organizes the ends, tasks, and projects of trolling. Mistakes in the performance of netting or tiring a fish may cause a failure on the practice end—that keeps you from catching the fish. The cultural logic also guides the acceptability of actions and the expression of emotions. For instance, how the trolling crew handles the situation when things go wrong and the fish escapes.

The practicing body is necessarily a sensing body. It is, after all, the body that enters a specific sensory, semiotic, and social environment as the medium through which practices are performed (Valtonen et al., 2010). The embodied practitioner builds understanding and develops sensory skills that help accomplish activities (Vannini et al., 2012). The senses are not only a means of comprehending physical phenomena but also invested with cultural values and meaning (e.g., Howes & Classen, 2014). For example, though generally perceived as a foul odor, the smell of fish is tolerable in anglers' general understanding because it is interpreted as a sign of success and embodies a sense of team spirit. The body and the senses have the means to both determine and be determined by practices. Here, the practicing body refers not only to the individual human body but also to those of other living and non-living beings (Gherardi, 2019; Haraway, 2008). The non-human, then, is not a mere backdrop or part of social practice. In this context, a non-human (e.g., artifact, fish, water, weather) can also be characterized as an active performer of practice.

A non-human artifact facilitates us doing things and does things for us humans. For instance, the non-human boat is an essential anchor of trolling practice. The aggregate agency to perform flows through the weaved bodies of a boat and a boat crew. Through artifacts (e.g., clothes, fishing gear), one can try to manage or adapt to the circumstances of the practice. These artifacts can also serve as an extension of the body, as a sensual prosthesis. For example, the rod and line extend the sense of touch. An angler can use artifacts to feel the fish and their movement, to see with their hands (Markuksela, 2013). The sensory capacities

of the sonar/sounder, for instance, can change our modes of sensing and widen our views of our sensory abilities; the human body's capabilities are altered.

Fish are also active (if unwilling) participants in angling (Bear & Eden, 2011). Here, the non-human fish is understood as a sentient being and a sense-making actor alongside humans. They are treated as agentive carriers of their practice (e.g., Markuksela, 2013), swimming their routes below the surface and propelling their sensing bodies through the water. They have their bodily routines and rhythmicity (e.g., eating, sleeping, mating) that form underwater patterns, constituting the secrets of the world of the fish (Markuksela & Valtonen, 2019). These ways of fish orient angler bodies and cause their activities to shift.

In practice-based thought, the embodied practitioners perform acts of movement (Hui, 2012). Thus, the focus must be on mobility: the physical motion of the fish and fishers, the movement of a non-human boat, the water, and the weather. Understanding fishing as action and the fisher as an actor allows one to reflect on the micro-mobilities of the body and analyze the performance. For example, one can analyze the act of landing the fish—capturing its sequences, rhythms, and routines. All in all, the embodied movement and intertwined senses co-constitute the action of trolling and the sensory inspection of the anglers' surroundings.

Trolling practice takes place in nature, specifically water, and in situational connections-in-action between the anglers and changing water and weather practices. The nature of these connections can be routine or, conversely, can involve random and unusual, emergent happenings. The boat is touched and might even be moved by the fluctuating waves. The movement of the waves and the boat impels, in turn, the corporeal crew. The weather's specific material forms (e.g., rain or sun, temperature), direct and redirect action, providing a rationale for material arrangements. The human and non-human parties temporally—yet actively—affect each other's being through their embodied practices. This practice-centered becoming is a relationship in which we act in the water; the water acts on, to, and from us in changing encounters (Pickering, 2017). Accordingly, trolling performance depends upon and works with multiple non-human forces and artifacts.

A more-than-human sensory ethnography

This chapter has placed emphasis on the various entanglements and enmeshments of sensory practice and performance, asking how sensory know-how is employed in different episodes of practice. Simultaneously, it has illustrated the anglers' "sensory sensibility" (Vannini et al., 2012), considering how the cultural context orders the meaning and use of the senses in practice and performance. For example, anglers may habitually sniff the air before deciding what sorts of lures to use or may even add a fragrance to the lures to increase their appeal. Attention is also paid to the related sensuousness of non-human material, such as the textures of the materials the fishers use or the sensory roles of the tools they operate. For example, the analysis considers how fishers anticipate changes in the weather by listening to the rustle of leaves or using the rod's sense of touch to tire a fish.

The sensory ethnographer's gaze is an embodied, multi-sensuous approach to gazing. It is also a performed practice that orients and contributes to forming unstable, contingent enactments and encounters (Larsen & Urry, 2011). The gazing eye cannot be separated from the moving and emplaced body. The gaze not only sees but is also in touch with the place and the materials, always involving the other senses (Lund, 2006). Therefore, the ethnographer's gaze listens to the bodily sensuous of whatever it communicates. Moreover, the role played

by the body determines how sensations are observed and registered in the field—cold hands touching slimy fish, aching buttocks after sitting in a boat in windy weather, the touch of warm wind on the skin, or splashes of cold water on the face. The "autoethnographic body" facilitates grasping the embodied nature of practices "from within"—from the point of view of practitioners (Markuksela, 2013). The attentive gaze, however, is oriented beyond the human body, observing the intermeshed non-human sensuousness intertwined with practice and taking also into account the more-than-human practice of carriers' corporeal mobility, not to mention the movement of fishing artifacts.

Trolling practice is navigated simultaneously above and beneath the surface. Therefore, my multi-site ethnographic fieldwork divides the interconnected modes of surface ethnography and underwater ethnography. Surface ethnography focuses on the messy ordering of unforeseen, more-than-human actions (e.g., water, weather) that are introduced into the intended human surface performance. Conducting it requires a vitalist ethnographic (Vannini, 2015) perspective, in which ethnographies are constantly on the move—becoming—and the outcomes differ from what was planned (Haanpää, 2022).

In underwater ethnography, the participant observer delves beneath the water surface. This kind of observation is a more-than-human approach to ethnographic research, a messy implementation of sensory and multispecies ethnography (Ogden et al., 2013). I call this a sonar-o-graphy, in which, by monitoring the sounder display, the ethnographer strives to untangle the meaning of fish movements and the signs of their sensual doings. In its implementation during my investigation, I tried to take another actor's perspective. Therefore, I was constantly asking questions: What did the fish do? Why did they do it, and how? What senses were involved in these actions? This procedure assisted me in the cultivation of a cross-sensory awareness (Pink, 2009), tuning into the sensory nuances of another's performance and gaining kinetic intelligence.

Throughout my fieldwork I gradually established a sensorial connection with and understanding between the studied fish and myself as a human, as well as the associated bodily micro-mobilities and postures. Thus, the research subject is not merely fish but also fisher (Ogden et al., 2013). The body becomes an arena of confrontation with otherness in the dialogue between the researcher and the fish (Mueller, 2017). One does not exactly know the sensation of the fish's movement but rather has a feel for the fish—an emphatic resonance, a sense of what its body language implies (Shapiro, 1990). Through it, the researcher can make sense of the fish and gain access to their sensuous world.

Interconnection can thus occur without actual contact zones via technologized observation. This distant method differs from Haraway's (2008, p. 3) exhortation to "learn to be worldly from grappling with," a process through which familiarization happens in close contact between humans and non-humans. However, more distanced methods may still reduce the unknown characteristics of the fish, rendering the non-human other close and familiar (Bear & Eden, 2011) without intimate contact.

Close contact between fish and anglers happens when they "hook up," or when actors above and beneath the surface integrate. This linkage is not a coincidence: it is an achievement. Anglers have successfully attained reflexivity, a practice that eventually makes the encounter possible. They have navigated their boat through wind-generated waves to the right spot in the right place. They have read the water from shallow to deep and localized a fish-holding area. After becoming familiar with the venue, they have chosen a lure suitable for the current water—weather time space. They have introduced "the chosen one" near the head of the prospective fish. This distinctive lure with different sensorial stimuli has roused

the fish's curiosity and tempted it to take a bite. In that fleeting moment, the angler has a feel for the fish. The fisher has adopted, bodily, the same wavelength as the fish.

The angler is concretely in touch with the fish through the rod and the line. Even more, the angler and fish are knotted bodily to each other, connected without body-to-body contact. The encounter carries deep connectedness in its non-human and human exchanges, its intimate and sensuous moments. The angler can sense the fish as an individual and connects this sensation to species-specific attributes. In sensing like a fish, the angler is, in a way, becoming an animal—not in terms of understanding the fish's inner experiences (Mueller, 2017) but in terms of acknowledging the fish's practical understanding. This shift may not be merely one-sided, as the fish can also be pulled into becoming a human. The fish then faces the prospect of becoming aware of the angler's intentions and practices, learning how a human acts. Thus, the fish is acting not on but with the human anglers (Haraway, 2008).

The partners in the relation usually do not see one another due to the visibility depth or the distance between them. On the angler's side, the sense of hearing is combined with kinesthetic movement. The angler can hear the loud sound of the fishing reel's drag and, at the same time, feel how hard the fish pulls on the line. The pressure gives the angler a hint of the size of the fish. The existence of the other is expressed through bodily movements, sensed by both parties through these instruments. It is fish movements with the rhythms and speeds of which anglers ebb and flow and which initiates their own movement. The sensory affection for its material surroundings may change within the same practice, employing different dimensions of a particular sense in the same task.

In this sensuous relationship, both embodied parties act, respond, and affect the other bodies involved. This Baradian intra-action can end in co-constitutive ways. It can turn into a last dance that occurs above the water, at the bottom of the vessel, or else the fish can get away—their moves, runs, and leaps can be successful! That is, they can cause the lines to break or detach from the hook. In such cases, the fish has outwitted the fisher, simultaneously becoming wise. With this sense of liberation, the fish can take a last gaze at the angler—wink teasingly—and give a goodbye wave of the tail while diving away. That is, in a word . . . sensible.

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23

SENSING DIRTY MATTER

Sensory ethnography as a more-than-human approach to urban inequalities

Elisa Fiore

From the very first days of my research on gentrification in Tor Pignattara, a multicultural suburb of the city of Rome, waste imposed its overwhelming presence on my senses. In those days and throughout my research stay, waste could be found basically everywhere around the neighborhood. Garbage bags were spilling out of overflowing bins and discharging foul leachate on the asphalt. Large and small waste ranging from mattresses and copy machines to empty beer bottles and shredded paper lay abandoned on sidewalks or in flowerbeds. Fetid organic matter like human feces and urine could be found in little back alleys. Human waste left behind by drug addicts or homeless people, such as burnt spoons, used syringes, and piles of rags, lay scattered in green areas. Due to its perceivable and overwhelming presence, urban waste became almost an obsession in the narratives and experiences of local residents. There was not a single research participant who failed to mention waste as the most pressing problem and biggest obstacle to urban regeneration in the neighborhood. Waste became a catalyst for the anger and frustration of a local population worn out by the city's failed waste management and street cleaning system.

While the situation of perceivable environmental degradation was not unique to Tor Pignattara—waste management and sanitation were plummeting in the whole of Rome due to a structural malfunction in the city's waste management (Nardi, 2017; Riitano, 2018)—all my research participants shared the conviction that the neighborhood was actually much dirtier and more degraded than other areas of the city. Almost everyone concurred that the ruined state of the neighborhood had to be imputed to Tor Pignattara's sizable immigrant population. The dominant discourse[1] accused local immigrants of polluting the neighborhood through what was perceived as unhygienic everyday practices such as cooking smelly food, improperly disposing of their waste, and drinking and urinating in public. This, paired up with a widespread sense of institutional abandonment, led to a multitude of small and larger scale clean-up operations in the neighborhood's streets, parks, and squares, in an attempt to banish those individuals and activities that threatened the area's propriety. The conflation of immigrants and waste in a negative stereotype points to how racialized perceptions of urban dirt and disorder can become tools for exclusionary placemaking, especially in ethnically diverse neighborhoods undergoing gentrification like Tor Pignattara.

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Figure 23.1 Self-portrait with waste on a discarded mirror. © E. Fiore, September 2017.

Academic literature on gentrification is mostly concerned with its economic, ecological, political, and sociodemographic components. This literature is extremely useful in providing answers regarding the causes of gentrification, its positive or negative effects, as well as its insertion into global neoliberal practices for urban regeneration. However, what is still lacking in gentrification literature and debates is a serious focus on the link between material urban environments and social relations. How do the sensory and material qualities of place relate to—and become vectors for—the inclusion or exclusion of specific lifeforms in/from the public life of the city? Based on the assumption that power materializes in the sensory–spatial textures of place (Degen, 2008), this chapter foregrounds everyday sensory experiences and their associated affective intensities as powerful means to look into the material conditions of urban life and how they intersect with questions of power.

In my research, I deployed sensory ethnography (Pink, 2009) as a methodology capable of capturing the commingling of bodies and spaces, as well as the embeddedness of social relations in changing sensory-material urban environments. Through explicit and sustained embodied engagement with the sensory-material reality of everyday urban contexts and practices, sensory ethnography does not only allow to probe the interplay of culture and the sensorium by connecting sensory experience with urban culture and power relations in city space. It also provides the possibility to reconfigure urban identities into emplaced-embodied encounters, and thus appreciate the contribution of material agency in the ontology of the urban social in gentrifying urban contexts.

In order to illustrate these arguments, this chapter presents a sensory ethnography of urban waste in Tor Pignattara. By paying close attention to the ways in which local residents

react to, distance themselves from, or try to remedy the perceived state of disrepair and degradation of their neighborhood, my analysis sheds light on the active contribution of "dirty" matter and discarded materials in the social production of urban difference and the shifting moral geographies of urban renewal.

Sensory ethnography: accounting for the agency of material urban landscapes

Questions around urban sensory politics have been tackled by scholars of sensory urbanism. This emerging field of scholarship has broadly investigated the role of the senses in the making of urban places, as well as emphasized "the extent to which the socio-spatial order of cities is a sensory order" (Jaffe et al., 2020, p. 3). Sensory urbanism has highlighted the dynamicity of urban sensory landscapes as socio-material realities in constant transformation through the myriads of bodies, spatial practices, and uses of city dwellers (e.g., Law, 2001; Palipane, 2017). At the same time, sensory urbanism has shown that a focus on sensorial and experiential parameters of the city links the personal lives of its diverse users with broader structural changes in the city's politics and economics (Degen, 2014). These can manifest in the ways in which state authorities and their allies consciously adapt, manipulate, and frame the senses to market and brand urban places (e.g., Degen, 2008; Pardy, 2009; Summers, 2019), as well as in the "visceral micro-politics" (Pow, 2017, p. 270) and intimate socio-spatial contestations that shape and regulate urban exclusion (Low, 2013). Sensory urbanism, in other words, has shown that power operates through the sensuous intertwinement of the human with the urban environment, thus reframing it into a material expression rather than an abstract process.

Sensory ethnography has emerged as an apt methodological companion to sensory urbanism for its capacity to focus on "the sensory-experiencing body and [explore] its interdependency with landscape" (Pink, 2009, p. 17). Sensory ethnography, in fact, builds on an understanding of social identities as inherently emplaced, that is as always embedded in the unique constellation of sensuous bodies, things, and artifacts that constitute the body's environment (see Howes, 2005). This reframing of the embodied subject through the sensuous materiality of the world extends subjectivity beyond the individual and toward those "social, sensory and material contexts characterized by, and productive of, particular power configurations that [people] experience through their whole bodies and that are constantly changing (even if in very minor ways)" (Pink, 2009, p. 33). Sensory ethnography's emphasis on the role of the environment in the emergence of embodied subjectivities essentially brings forth the non-human element as another active factor in the ontology of our social worlds.

In my research, sensory ethnography has been particularly helpful in tracing the power relations inscribed in the sensuous urban landscape of Tor Pignattara and understanding how the sensuous-material textures of place enabled or obstructed residents' emplacement. As Pink (2008a) explains, sensory ethnography can help the researcher catch a glimpse of the multiple and sometimes intersecting subjectivities emerging from multisensory spatial interactions with the material environment. Indeed, even though a neighborhood can be identified as a particular physical urban space, phenomenologically it can be experienced as many types of place simultaneously, depending on who is experiencing and making place. This irreducibility of urban space to a single meaning and experience for all reveals the power differentials in the sensory constitution of place, as well as the contests and tensions between different actors (Degen, 2001; Rodman, 2003).

The different experiences and interpretations of place that a variety of users express point in turn to the sensorial as both the vehicle through which material agency manifests itself and the substance of entanglement between the material and the social. Through their sensory qualities, material urban environments have the power to affectively interpellate certain groups while alienating others, and can thus be understood as active agents in the social and cultural spatialization of life across the city (Degen, 2001, 2008). In this sense, by drawing attention to the different ways a city or a neighborhood is felt in the immediate lived experience, sensory ethnography also helps reconfigure the relationship between bodies and places as a constant relational process.

Sensory ethnography's capacity to acknowledge the agency of both human and non-human elements in the making of place enabled me to account for the active contribution of waste matter in the iterative materialization of racialized processes of urban exclusion and dispossession in Tor Pignattara. In what comes, I will show how the conflation of immigrants with waste does not only prove that sensory designations of disordered landscapes can act as means of social classification and are thus inextricably enmeshed in urban relations of power and domination (Campkin & Cox, 2012; McKee, 2015). It also highlights the role of waste as "an actor from which stigma can . . . emanate" (Baumann & Massalha, 2022, p. 550). Through sensory revulsion, waste reifies and reinforces the unequal position of local immigrants in the material space of the neighborhood, as well as gives rise to moral spatial interventions that make them vulnerable to exclusion and displacement. The analysis of my fieldwork data rests on scholarship that links phenomenological experiences of littered landscapes to the socio-material processes of stratification implicated in city making (Ghertner, 2015; McKee, 2015).

Tor Pignattara: brief overview of a changing neighborhood

Tor Pignattara is a densely populated district administratively located in Rome's V Municipality, which emerged around the turn of the twentieth century as one of the first spontaneous settlements of the southeastern quadrant of the city (Ficacci, 2007). The high population density is reflected in an intensively built and highly irregular urban environment, resulting from a disorderly process of urbanization that led, over the years, to the juxtaposition of ancient archaeological elements, abandoned industrial conglomerates, high-rise condominiums, small houses, and numerous examples of spontaneous, often illegal, architecture (Pompeo, 2011; Severino, 2005) (see Figure 23.2). As a consequence of the fast process of depopulation and productive evacuation caused by the economic crisis of 1992, Tor Pignattara became the elected destination for large immigrant communities, predominantly Bangladeshis, attracted by the availability of empty and affordable commercial and residential spaces (Pompeo, 2011; Pompeo & Priori, 2009; Priori, 2011, 2012). Due to this concentration, over the years the area underwent a spontaneous process of renaming that labeled it as the Banglatown of Rome. While the term "Banglatown" was introduced by the local Bangladeshi community to instigate a sense of pride and territorial appropriation (Broccolini, 2017), in the public opinion and in the media the toponym has often been used to signify the area as an immigrant ghetto at risk of Islamic radicalization (Fioretti & Briata, 2019).

Over the last ten years, Tor Pignattara has undergone a process of bottom-up gentrification due in large part to the influx of middle-class Italian newcomers drawn to the area by affordable rents or property prices, on the one hand, and a rising multicultural consciousness

Figure 23.2 The mosaic of spontaneous architecture in Tor Pignattara seen from my kitchen window. © E. Fiore, January 2018.

on the other. However, what these middle-class newcomers found was a neighborhood in a state of physical, social, and cultural deterioration, governed by a weak and ineffective public administration incapable of properly providing for their needs and demands. In response to this situation of institutional disinterest that slowed down the spontaneous process of gentrification already underway, many Italian newcomers organized themselves in a multitude of neighborhood committees and organizations promoting a form of bottom-up regeneration that gradually led to the symbolic and cultural reappreciation of the neighborhood from degraded periphery to vibrant (multi)ethnic quarter. Today, the toponym Banglatown has ceased to be a label of spatial stigmatization and has turned into a spatial brand intensifying the ethnic and cosmopolitan character of the neighborhood. While aestheticized ethnicity played a central role in Tor Pignattara's desirability, the everyday conflicts and tensions connected with the tangible presence of Bangladeshi and other immigrants raises questions about the real degree of acceptance and tolerance inherent in the neighborhood's revival, and issues a warning as to the exclusionary potential of ensuing gentrification in the area (Annunziata, 2010; Coletti & Rabbiosi, 2020).

Urban waste, in particular, has been and still is a major point of contention between native and immigrant residents. For the last ten years, the omnipresence of waste in Tor Pignattara has been experienced, narrated, and interacted with through a racializing prism that conflates local manifestations of urban pollution and degradation with the tangible presence of immigrant residents. In the next section, I will analyze one citizen-led activity launched in October 2017—and still ongoing—to clean and upgrade one of Tor Pignattara's public parks: the *Comitato Spontaneo Acquedotto Alessandrino* (hereafter, only *Comitato*). This case will help me reveal how the overwhelming presence of waste in the neighborhood instigates the proliferation of organized practices of waste policing and removal that substitute environmental for racial contamination and posit the displacement or containment of racialized bodies as a necessary

process of urban improvement. Through a focus on waste's sensory, affective, and moral entanglements, I will reframe dirty matter as an active participant in the racialized socio-spatial regime of gentrification in Tor Pignattara. It should be noted that the *Comitato* is only one among several other bottom-up environmental upgrading interventions I was able to observe during my eight months of fieldwork (see Fiore, 2021 for more on this). This initiative has been chosen as a case here not only because it is, to this day, the most active, prolific, vocal, and successful organization trying to contrast environmental degradation in the neighborhood. It is also the one that got the most support from the local population in terms of active involvement and funding, which signals the widespread approval of their mission and the methods employed to accomplish it.

Dirty matter as a vector of racialized gentrification in Tor Pignattara

The Giordano Sangalli Park is a small but rather impressive green area situated at the heart of Tor Pignattara. The park owes a great deal of its charm to the *Aqua Alexandrina*, a stunningly well-preserved stretch of the ancient Roman aqueduct that flanks the park on its northern side. Despite its central position, this urban park was for a long time experienced by the local Italian population as a no-go zone. For years, the park was in a state of total abandonment after local institutions suspended all waste collection and public green maintenance services. The situation of environmental degradation became so severe that the park was described by local residents as "a latrine" and "an open-air dump" (Comitato di Quartiere Tor Pignattara, 2016).[2] At the start of my fieldwork in the late Summer of 2017, the park was still in a rather dreadful situation. My field diary is punctuated by entries where I remark about the overgrown grass and unkempt hedges, but also the large amount of waste scattered around and ranging from beer bottles, plastic bottles, and advertisement flyers to broken furniture, abandoned scooters, and a burnt-up car carcass (see Figure 23.3).

Figure 23.3 Burnt-up car-carcass in Giordano Sangalli Park. © E. Fiore, December 2017.

Figure 23.4 Mattresses under the arches of the Aqua Alexandrina at the Giordano Sangalli Park. © E. Fiore, October 2017

Alongside institutional abandonment, the local Italian population identified a second culprit in this process of environmental degradation. Over the years, in fact, the park had become a space of socialization for groups of Bangladeshi and North-African men who gathered at night around the few available benches to drink beer and smoke. These groups were portrayed by residents as "gatherings of drug dealers, junkies, and drunks" who soiled the park with "glass bottles and garbage of all kinds" (interviewed in Nozzoli, 2012). To make matters worse, the park also gave shelter to homeless refugees. The situation was particularly severe at the start of my fieldwork, when many refugee centers across the city had to close their doors due to defunding (Minister of the Interior, 2018). With nowhere else to go, between 10 and 15 homeless refugee men regularly slept on discarded mattresses under the arches of the aqueduct (see Figure 23.4). Their presence was poorly tolerated by the local population, who accused them of contaminating the park by "pissing and shitting in it" (Comitato di Quartiere Tor Pignattara, 2017). The frustration and anger of residents reached its peak on the night of 12th October 2017, when a fire destroyed some of the makeshift shelters and damaged one arch of the aqueduct. It was never clear whether it was arson or an accident.

It was as an immediate response to the fire that the *Comitato Spontaneo Acquedotto Alessandrino* was born. Formed by a group of Italian residents fed up with the situation of environmental and social decay of the park, the *Comitato* took charge of the park's maintenance, cleaning, and upgrade to fill the void left by local institutions. The day after the fire, a group of volunteers armed with hand carts, shovels, garbage bags, and thick work gloves forcefully

removed all the mattresses, sleeping bags, blankets, cardboard boxes, and clothes they found under the arches. That same day, a triumphant post appeared on the brand-new Facebook page of the *Comitato*: "This weekend, we have decontaminated a vast area of the Giordano Sangalli Park. . . . We made use of the municipal bulky waste collection service . . . to free the park from eleven mattresses and other waste" (Parco Sangalli Comitato Spontaneo Acquedotto Alessandrino, 2017).

Through the symbolic conflation of racialized poverty with contamination and waste, the founding gesture of the *Comitato* highlights what Maurizia Boscagli (2014, p. 230) has defined as "the recalcitrance" of waste matter, that is "its capacity to signify the redundant, the wasted, the irredeemably out of place" once its characteristics are extended to human beings who have become themselves disposable. By virtue of their closeness to waste, homeless refugees are constructed here as "wasted lives" (Bauman, 2004) to be removed from the park so that the livelihood of respectable citizens can be ensured. This suggests that waste in Tor Pignattara does not figure solely as "matter out of place" (Douglas, 1966, p. 44), but also and most importantly as "displacing matter" (Baumann & Massalha, 2022, p. 560) that marks immigrant park users as trespassers seen to be "out of place" in their neighborhood and framed as dangerous for spoiling the otherwise clean urban environment.

The displacing force of waste matter in Tor Pignattara manifests itself in its entangled sensory, affective, and moral qualities. As I learned in my interview with Sergio (a pseudonym), one of the founders of the *Comitato*, sensory grievances were vital in legitimizing and justifying displacement.

> There is constant bivouac [at the park], the drunks' rendezvous. And then, being uncivilized, they drink 18 beers and leave 18 empty bottles under a tree or on a flowerbed. They make the neighborhood degraded, dirty. . . . When you walk out the door, you smell the stench and see the filth. Then you go home and feel like you need to have a shower, because you feel dirty.
>
> *(Sergio, 12 December 2017)*

Sergio's construction of racialized poverty as an abject outsider relies on a rich sensory language—of foul smells, waste, filth—that naturalizes dirtiness in the bodies of those immigrant men who inhabited the park, evoking them as a threatening category and placing them beyond accepted standards of civility and propriety (see Ghertner, 2015; McKee, 2015). But it is the stickiness of racialized urban defilement that is especially noteworthy here. Stickiness heightens Sergio's revulsion toward waste matter and increases the urgency of its removal, lest it contaminates upstanding citizens like himself (see Ahmed 2004). We can thus see how sensory grievances - olfactory, visual, and haptic - work performatively to create symbolic distance to those objects whose proximity feels threatening, contaminating, or corrupting.

The heightened disgustingness of waste plays in turn a crucial role in affectively reinforcing racialized power relations in Tor Pignattara. Indeed, disgust does not simply create distance to waste, but also creates adherence between those bodies who engage in wasteful practices and the waste they leave behind. So much so that these bodies come to stand for waste and come to be perceived as themselves disgusting. As the following excerpt shows, the metonymic contact between poor immigrants and waste has translated into a "spatial politics of abjection" (Ghertner, 2015, p. 79) that constructs the removal of racialized poverty as a process of

urban improvement and a positive form of violence aimed at cleaning the neighborhood to speed up its march toward a fully middle-class status. The *Comitato*, in fact, operates according to a logic of "spatial purification" (Sibley, 1988) that normalizes sensory revulsion into an organizing lens for remaking the city.

> Citizens need to intervene when they see a drunk sleeping on a discarded mattress. They should say to him, "Hey, what are you doing here?" Then they should take the bloody mattress and throw it away, call the police, activate themselves. People walk past as if it was all normal. They look and leave. It's disgusting.

The affective conflation of homelessness with waste irremediably confirms its unsightliness and inherent nature as an object of urban disorder, thus marking it for removal. In this sense, waste in Tor Pignattara operates as a "border object" (Ahmed, 2004, p. 88) that reifies racialized relations of power in the sensory-material textures of space.

The *Comitato*'s logic of spatial purification emerges also in their linking morality with waste. This becomes especially evident in the following excerpt, where Sergio elaborates on systematic waste removal as a civilizing project. During our interview, which was held at the park, he directed my gaze around to appreciate the striking cleanliness of the park while at the same time conjuring the park's degraded past to make the difference even more apparent.

> It's only three months we are active, and you can already see the results! Before, it was normal to see empty beer bottles and waste all around. Now, if there is a piece of paper, it stands out. You see there? [He points to a piece of paper not too distant from us] There is one. You can see it. Before, instead, you could not see the green. . . . Before you had hobos and drunks who came here and left beer bottles in the park. Now, you have a clean park where kids go play. When you create beauty, the scum goes away.

Even in their absence, waste and wasteful bodies continue to operate in Sergio's account as the constitutive outside against which middle-class propriety and civilization are defined. The removal of waste from the park bears a twofold function in the social and hence moral revaluation of the park. First, it imposes specific felt standards of order and appearance in the urban landscape that enable the easy identification of what does and does not belong in the regenerated urban landscape (Ghertner, 2015). In the new aesthetic order enforced by the *Comitato* on the park, where even a small piece of paper stands out, wasteful bodies (the homeless or the drunk) and activities (rough sleeping or drinking in public) are self-evidently out of place. Second, and consequently, waste removal in the Giordano Sangalli Park can be understood as a moral reform attempting to attract certain kinds of citizens and subjectivities by imposing a civilizing spatial arrangement, while simultaneously excluding, controlling, and containing undesired bodies and behaviors (Sandercock, 2000; Summers & Howell, 2019). Sergio explicitly frames waste removal as a displacing strategy to keep debased bodies and behaviors out of the park. The opposition between wasteful immigrants and playing children—as sensory-affective-embodied tropes of corruption and purity respectively—articulates racialized poverty and middle-class whiteness as embodied social identities inhabiting opposite moral positions.

Through waste removal, the *Comitato* was able to impose a whole new organization of social life in the area of the park. In barely two years, they have transformed the Giordano Sangalli Park into a clean and vibrant green space hosting activities for upstanding middle-class

citizens like book clubs, yoga classes, and an organic farmers market. So much so that, in the neighborhood's newspaper *Viavai*, the park has been renamed into "the Central Park of Tor Pignattara" and elevated to the symbol "of a neighbourhood who wants to redeem itself" (Ranalletta, 2019, n.p.). The park's revival, however, has reinforced existing power structures that enable the surveillance and marginalization of poor and racialized park users. The *Comitato*'s noble fight against waste and disorder in the Giordano Sangalli Park ultimately took the more disturbing contours of a social cleansing operation leading to the active exclusion, expulsion, and erasure of racialized poverty from the space of the neighborhood.

Conclusion

In this chapter, I have shown how sensory ethnography can sustain studies investigating the active contribution of materiality in the (re)production of social inequality. Earlier I explained that sensory ethnography is a research methodology that posits everyday sensory experiences and their associated affective intensities as powerful means of inquiring into the material conditions of life and how these intersect with questions of power. By "attending to the sensoriality and materiality of other people's ways of being in the world" (Pink, 2008b, p. 193), sensory ethnography reconfigures the sensory as the locus where the dichotomy between inside and outside gets challenged. As such, it highlights the co-constitutive nature of body and environment and reveals the self as always already constituted by place. Thus conceived, the sensory is reconfigured as a performative engagement with reality, a generative way of knowing the world through which the knowing subject and the world co-emerge.

In the specific context of my work, sensory ethnography has helped me account for the agency of material urban environments in shoring up racialized processes of urban exclusion and dispossession in gentrifying multicultural neighborhoods. The case I presented here uses sensory ethnography to highlight "the important role and layered operations of waste in processes of urban exclusion" (Baumann & Massalha, 2022, p. 564). Starting from the omnipresence of waste, I was able to show how the materiality and sensory experience of the city become important vectors for delineating social boundaries in contested urban space. Sensory ethnography made me first and foremost attentive to the cultivated sensory affective, and moral orientations that conflate racialized poverty with tangible manifestations of disorder and degradation in the urban environment. The *Comitato*'s deployment of racialized discourses of cleanliness and dirt testifies to how sensory stereotypes become embedded in the perceptual and affective patterns through which people learn to sense evidence of and assign responsibility for disorder in their surroundings (see McKee, 2015). Moreover, by drawing attention to the ways in which racialized forms of disgust are mediated through the sensory-material components of place in Tor Pignattara, a sensory ethnographic approach enabled me to reframe waste as "an *actor* in urban geopolitics" (Baumann & Massalha, 2022, p. 565; original emphasis), advancing the social and spatial abjection of those racialized and classed bodies perceived as obstacles to urban regeneration.

Ultimately, sensory ethnography's understanding of sociality as sensory and material encounters through which identities are lived out can help (re)animate a world of things that we generally perceive as inert. This redistribution of power and agency to the material (see Bennett, 2010), however, should not be taken as a way to reduce human responsibility

for the symbolic and physical violence of social inequality. On the contrary, it should serve as an invitation to be more aware and mindful of how the material reality of social hierarchy is saturated with and kept in place by our mundane senses and perceptual habits. Only by politicizing our sensory perceptions and imaginations as implicated in socio-material processes of stratification can we begin to disconfirm their authenticating power while staying open to other and more ethical ways of sensing (Sekimoto, 2018). Here lies the great political potential of sensory ethnography, in its capacity to reveal how both subject and object are implicated in the networks of power that produce them and opening up the possibility for alternative and more ethical ways of being in the world.

Notes

1 Although an alternative explanation of the littered landscape of Tor Pignattara existed among residents, which interprets waste as an indicator of institutional abandonment following the area's reputation as an immigrant ghetto, this explanation remains marginal to the dominant discourse discussed here.
2 All quotes from newspapers, social media, and interviews included in this section are translated from Italian by the author.

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24

RESONANCE

Engaging with the more-than-human through Ladakhi soundworlds

Christopher Wright

Mountains resonate. Standing in the bottom of steep-sided high-altitude desert valleys among the mountains of Ladakh, in the Western Himalayas, I hear/feel a sonorous bass rumble. Although not totally omnipresent—the mountains are also sometimes eerily silent—this is an experience that is also somehow one of a great weight. It is a synesthetic moment. The mountains are sonic agents—they are active emitters of sound—in effect they are transducers, devices for focusing energy and moving it between one state and another. This synesthetic experience is also one of scale—I am dwarfed by both the geology and the sound with its weight. In the process I am in many ways transduced myself—directly addressed by the mountains. It would of course be easy to place this sensory experience in the realm of "impression"—as in "the mountains give the impression that they resonate"—but this is merely a way of relegating sensory truth, of opening it up to the possibility that your senses somehow deceive you in an experience like this. Impression is the wrong word when used in this way, it suggests some kind of falsity to the sensation.

Maybe using the word in the sense of "molding" is better; as in, I am molded by the mountains. Some of the 1960s Op Art created by artists like Bridget Riley visibly moves—when you stand in front of it, your eyes tell you the painting flickers, but we nevertheless assure ourselves that this is just illusory. I do not want to discount my sensory experience of the mountains as an impression. There is a long and troubled history of aesthetic "impressions" of mountains (Nicolson, 1997), and I am aware that my language is emotive—words can be relatively imprecise and blunt when it comes to relaying sensory experiences—but I want to stay with that sensory moment. Translating senses into language is one way of relaying them, but in my research I am concerned with exploring more directly sensorial means of sharing them with others. This remains a central issue for how we as anthropologists engage with the senses.

My sensory experience of the mountains was one of the catalysts for ongoing research into the soundworlds of Ladakh as part of a larger project on digital media.[1] I want to show how starting with a sensory moment like this—being alive to those moments—can be one route of entry into other sonic worlds and ways of working with the senses methodologically. Soundworlds are particular constellations of sonic experiences, particular attentive formations, and I am concerned with how this specific sensory experience unfolds, its relation to

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Figure 24.1 Mountain near Yurutse. Photograph by the author.

contemporary and future-orientated Ladakhi concerns with the mountain environment, and how to make it accessible to others as part of a continuing collaborative engagement with Ladakhi friends.

Recent changes to temperature as a result of human economic activity in places other than Ladakh have caused Himalayan glaciers to recede, as is the case with glaciers globally. According to one recent report, half the world's glaciers will have disappeared by 2100 even if temperature rises are limited to 1.5°C (Rounce et al., 2023). For many Ladakhi villages which are dependent on glacial meltwater for drinking water and crop irrigation, this is a massively important mitigating factor that adds to the increasing unsustainability of rural village life. In rural villages, crops such as *nas*—a type of high-altitude barley—are grown and harvested twice a year through systems of communal agricultural labor. But retreating glaciers mean there is a lack of meltwater in the important early spring sowing season, and this means it is only possible to plant one crop every season. Together with a shift of the younger generation to urban centers like Leh, this is making many villages unsustainable.

One recent practical solution to this has been the creation of artificial glaciers. These take several different forms, from a series of drystone walls built across valleys to gradually trap meltwater in the early winter as it freezes and makes the walls solid dams, to purpose—built metal armatures that create "ice stupas" (Nüsser et al., 2019). The latter have achieved some media notoriety as they are visually spectacular structures of ice which can reach the size of three-story houses and resemble the Tibetan Buddhist stupas that are a ubiquitous feature of the Ladakhi landscape (Kumar-Rao, 2020). In a strange merging of film and the world, the Ladakhi inventor of these ice stupas—Sonam Wangchuk (who runs the amazing Student's Educational and Cultural Movement of Ladakh SECMOL)—was also the inspiration for the

character Wangdu—played by Aamir Khan—in Rajkumar Hirani's immensely popular 2009 Bollywood film "Three Idiots." This film—the final section of which is set in Ladakh—also provoked a massive increase in the number of domestic Indian tourists traveling to Ladakh and created a minor industry in terms of the infrastructure to allow them to photographically re-create one of the iconic scenes of the film at Pangong lake. You can travel by road to the lake—an incredibly intense cerulean blue amidst the mountains—and have your photograph taken sitting on a small yellow scooter similar to the one featured in the film.

Attitudes toward the mountain environment—those held by Ladakhis of all ages, tourists (both domestic and foreign), and environmentalists—are a key factor influencing the future sustainability of Ladakhi lifeways. These attitudes and the kinds of networks of sensible attention which sustain them are the setting within which my own experience of the agency of mountains occurs. "Agency" is another difficult term in this context, fraught with ambiguity and assumptions. The Ladakhi word often used for mountain is *kangri*—also translated as "peak"—and within the particular mixture of Bon and Tibetan Buddhism thought that is prevalent in Ladkahi religious practices, mountains are deities capable of both benign (protective) and malevolent actions. Using the word "agency" in this context is to have already separated the world out into animate and inanimate, and that is something that needs to be approached critically in a context where mountains are deities. In a time of catastrophic climate change, it is important to think and act beyond this binary in new and imaginative ways that consider the future of mountains and the possibility of Ladakhi's living among them.

My simple point is that sensory moments—like my own described earlier—although initially an individual experience, can also be potentially creative catalysts for working with the senses to engage with a set of future-orientated Ladakhi dynamics around environment. I want to demonstrate the creative potential of staying with the senses as one route to the co-production of digital media that addresses some of those current concerns about the future—co-creating new networks of sensible attention.

Although there are many issues—such as uneven access to the digital—bringing those attentive formations to visibility is a way of initiating and engaging in dialogues about Ladakhi futures. Devices—digital and otherwise—can colonize perceptions and foreclose experience as much as they can provide access to sensory perceptions—so we need to be vigilant and continually examine attentive formations. I want to show the possibilities of using digital forms to mediate or relay the field of intersenses (as in the weight of sound) and engage beyond discrete sensory experience to create new attentive affinities. To do so requires staying with the senses rather than just moving immediately to considering how they are culturally modulated or understood.

In his extraordinary book that considers the earth's sonic energies and their technological identification, monitoring, and reproduction, Douglas Kahn quotes the journal *The Electrical World* of 1883:

> [C]iting Sir Isaac Newton's comparison of "the seven colors of the prismatic spectrum to the average tones of the diatonic scale" as one "correlation of forces" that could extend to an exploration between "light and electricity." The telegraph and the telephone had primed the possibility for "telephotoscopy—the vision of objects at a distance," and perhaps the transmission of other senses, smell and touch, the editorial speculated, since electricity and nerves share a common energetic sensibility.
>
> *(Kahn, 2013, p. 11)*

The notion that the senses can be relayed or mediated in some kind of direct way is by no means new, and we are at a moment where "sensory" is a term applied to the use of various forms of digital media within the framework of anthropology. The relaying of sound (graphic forms of notation aside) is always a "live" event—sound is lived—and I want to argue for the productive possibilities that sound can play when it is treated sensually as a methodological tool. Researching and working in sound, rather than writing about sound.

Sonic mountains

Mountains are in motion, just not perceptibly so to our senses in any immediate way—although mountain earthquakes are one clear exception. Mountains grow, erode, and change continually and they create and channel vast energies, for example, producing large amounts of atmospheric electricity. Any perception of them as static is the result of considering them in particular restricted timescales, and in some ways also a failure to really consider their materiality. Kahn points out that "all that is required to transform an electrostatic or electromagnetic state to sound is the proper transducer, and transducers can be both naturally occurring and anthropic (technological)" (Kahn, 2013, p. 7). Although separating out the natural and the anthropic is to do the work of what Christopher Pinney calls "purification"—the division of the world into the human and the non-human (Pinney, 2005), it is really productive to think of the ways in which energies change forms and move across various boundaries. These energetic transformations might be understood differently according to the frameworks of science or Tibetan Buddhism, but treating the senses as energies is a creative way of tracing lines of connection, lived affinities between sensual experiences and the contexts of their existence, and their mediation.

In energetic terms, mountains produce lee waves, atmospheric disturbances in the form of regular standing cloud waves that are created by winds and temperature inversions setting up oscillating patterns of air movement as they move over mountain ranges. These waves can persist for hundreds of miles downstream of the winds flowing over mountains and also create smaller lens-shaped individual clouds that are frequently mistaken for UFOs. Winds moving across mountains also create sonic frequencies that can reverberate over long distances. Listening to the roaring of a snow plume off a Himalayan peak while you stand 10 miles away is an incredible sonic experience.

Some of the energetic properties of mountains are only accessible to humans through the use of specialized equipment—they require mediation. In terms of this kind of mediation, Kahn also argues for the ways in which nature is more deeply embedded in media than just through processes of resource extraction, environmental destruction, pollution (of workers and landscapes), energy consumption, and toxic waste. Human-made media (digital and non-digital) participate in a wider world of earth energies. For example, Kahn discusses how the frequencies of wireless transmissions interact with those generated by the earth's magnetosphere (Kahn, 2013, p. 9). Media devices and infrastructures certainly do draw heavily on extractive processes, the use of minerals, fossil fuels, water, etc. even before they are actively used, but they also engage with a wider—truly global—field of energies and transducers. We certainly need a critical and vigilant geology of media, but we also need a "deep" media ecology that conjoins these realms—natural and human-made media—or rather does not immediately separate them out from each other.[2] This would begin to allow for an understanding of mountain resonance beyond the notion that it is simply a sensory impression, and an engagement with the more-than-human.

My initial sensory experience of mountain resonance is one of contact—I resonate *with* the mountains. This is a kind of "joining with" that Tim Ingold argues is a corrective to the kinds of hylomorphic thinking—the separation of form and matter (form is imposed on an inert matter, which leads to particular kinds of animism)—that has been central to Eurocentric understandings of the world and its energies (Ingold, 2010). This kind of contact is a particular feature of sound—resonating through sound is a participatory process in which emitters and transducers are conjoined. My concern in engaging anthropologically with this experience is not just to create work *about* resonating—but to resonate with others. This "joining with" in Ingold's sense, is a central issue for anthropological endeavors—why does so much study of the senses not also involve experimental forms of mediation, a more sensual mediation or joining with?

In the early 2000s, the anthropologist and curator Maureen Matthews made a series of radio documentaries for the Canadian Broadcasting Company, one of which featured older Cree men telling jokes. Although no doubt many of the cultural resonances and framings would not have been accessible to non-Cree listeners, the lived effect of listening to the laughter was contagious; you laughed with those telling the jokes (Matthews, personal communication, 2022). In comparison, Keith Basso's (1979) book on the structural dynamics of Western Apache joking—while academically thorough—does not illicit laughter in the same way. There are issues of empathy and "joining with" at play here, as well as considerations of the appropriate use of media for relaying the senses. I think relaying is a better term than reproduction, although there are of course many issues with the technical reproduction of sound and effectively shifting or displacing sound from the context of its creation to another. But one of the affordances of relaying sound is precisely this kind of "joining with" that Ingold is arguing for. Considering some of the affordances of different media—the ways in which they can relay the senses—is crucial to a reinvigorated creative anthropological engagement with them. The sonic not so much as a representation of, but more of a way of "joining with" that includes others in the process.

In many ways, sounds are distinctly situated—they originate from specific contexts—but also transitional in that they can connect those contexts and listeners, including displaced ones, in sensual ways (Ganchrow, 2021, p. 67). Sound radiates or broadcasts environments that are made up of particular constellations of flora, fauna, minerals, human sounds, etc. and connects them with listeners (Ganchrow, 2021, p. 68). An incredible example of this is the sound recordist Chris Watson's soundscape composition of the Icelandic glacier Vatnajokull from his 2003 album *Weather Report* (Watson, 2003). This composition is a collage of recorded and mixed sounds that map the sonic journey the glacier makes from its source to the sea. The sounds position or transport the listener to places that are in some respects beyond most sonic experience. Listening to the composition, we are sometimes at the bottom of deep crevasses in the glacier—experiencing the sound of the ice creaking, cracking and groaning, and this lived sonic experience is also (based on my own experiences of using it in teaching) perceived as a physical one of a great weight. Bass sounds in music are, of course, often described as "heavy" and, although there are variations in pressure and amplitude to be taken into account (bass frequencies can literally be breath-taking), this association of low frequency and weight, an intersense, is a perception that is culturally pervasive.

Some of the sounds of mountains are equally bass and heavy, and avalanches, rivers, rockfalls, and winds can all set up resonant frequencies that are capable of traveling long distances. These resonances are channeled by steep-sided valleys and often compressed by certain atmospheric conditions—cold air at higher altitudes forces soundwaves down and

has the effect of concentrating them. In addition to this, lower bass frequencies do not get attenuated—do not lose their energy—in the way that high frequencies are much quicker to dissipate. This is why the low rumbles emitted by elephants, whales, helicopter blades, and mega-bass car stereos travel such a long way. For whales, this can allow effective resonances to travel from ocean to ocean as water is a better medium for sound waves than air. And think of the physical experience of a passing car with mega-bass that is simultaneous with the sonic experience. Particular rock features like towers and arches resonate, vibrating with the winds that move across and through them—although to make that resonance audible to human ears they need to be recorded using a seismograph and the resultant sound vibrations sped up considerably (Finnegan et al., 2021) There is a long history of humans listening to earthquakes, and within the Himalayan region the resonances created by the disastrous Great Kashmir earthquake of 2005 were picked up by instruments across the globe. The scale of this kind of sound event is truly global (Bedard & Georges, 2000). But my ears are not seismographs and although, in terms of mountain resonance, audibility is only part of the experience, my aural senses can only access certain frequencies, not others.

"Normal" human hearing is often described as existing within the range of 20–20,000 Hz, although as we are born and age this shifts. Beyond this range of human audibility are the frequencies of ultrasound and infrasound—the latter often being described as below the threshold of human audibility, although to some extent it just needs massive amplitude to be registered audibly by human ears. An acknowledgment of these frequencies which are inaccessible to human hearing makes us aware of the existence of other sound worlds. It also reveals the limits of an approach to the senses as discrete; low frequencies are felt as much as heard. The sound production (importantly not "reproduction" as they didn't record earthquakes) system called Sensurround was first developed for the 1974 Hollywood film "Earthquake," which went on to win an Oscar for best sound. The hugely expensive and vast system consisting of hundreds of specially designed bass speakers which required additional power generators was installed beneath the floor of only a handful of cinemas, but it could produce infrasound resonances down to 5 Hz. Much of this resonance would be felt by the audience rather than perceived audibly. Although not strictly speaking infrasound, Gaspar Noé's 2002 film "Irreversible" used a continuous low-frequency sonic tone close to 27 Hz for 60 minutes to create a physical sense of tension in the cinema audience. This sensual—although the experience is actually one of discomfort—element of the film is largely lost when watching it on DVD on a small screen, even if the playback system has a serious subwoofer. As the example of "Earthquake" demonstrates, there are significant issues in attempting to artificially create or record infrasound. The mediation or relaying of sound below the range of human audibility is complex technically, but its ability to produce other physical effects is well known.

Although infrasound is technically considered to be below the threshold of human hearing, it can still be perceptible to the senses; it can be felt rather than heard. This is a form of intersense experience. Many large European Christian churches and cathedrals have organ pipes that are long enough to produce infrasound frequencies, adding to the sensual experience of religious ritual, and in 1998 the physicist and paranormal investigator Vic Tandy argued that a faulty ceiling fan was producing infrasound that was the source of a sense of unease in office workers who had attributed their sensory experience to one of being haunted (Tandy, 1998). There is a whole subfield of research into the links between infrasound and experiences of the paranormal, and there are certainly links between infrasound and the feeling of various kinds of sensory "presence."

The composer and musician Sarah Angliss has experimented with infrasound in a 2003 performance called Soundless Music in which listeners at a concert were intermittently subjected to bursts of infrasound at moments unknown to them and afterward reported a corresponding sense of unease at those moments (Angliss, n.d.). To do this, Angliss built an infrasound generator, a 7-meter-long rigid plastic sewer pipe with a powerful long-stroke subwoofer located halfway down it. During the test of the generator at 17.5 Hz, it managed to make objects in the room vibrate but did not produce any audible sound, although there was a palpable sense of "acoustically energised air" (Angliss, n.d.). How experiences like infrasound are understood is obviously one key concern of anthropological approaches to lived soundworlds, but the creative use of sound as a way of addressing audiences should also be a direct methodological focus for sensory anthropological research into sound.

Extreme forms of sound and the way they are relayed to audiences are also having a renaissance as a weapon. Although there have been many earlier attempts to create sonic weapons, the Los Angeles Police Department have recently, along with many other US police forces, made use of a focused sound generator called a Long Range Acoustic Device (LRAD) developed by US company Genasys. The LRAD creates a powerful focused "beam" of sound toward the other end of the audible spectrum to infrasound at a 2,000–4,000 Hz frequency which is the range to which the human ear is most sensitive. The devices, which can also act more benignly as long-distance hailing devices, have been used offensively in "siren" mode at Black Lives Matters protests and there are online guides about how to deal with them (Peskoe-Yang, 2020). In addition to operating at a frequency to which our ears are particularly attuned, the LRAD generates sound at high amplitudes, typically around 160 dB. The sound of a jet taking off is quieter, and at those amplitudes sound can cause permanent hearing damage as well as feelings of sickness and disorientation. There is discussion online about whether the Genasys device—the details of which are not available publicly—also makes use of ultrasonic frequencies.

Figure 24.2 Mountains seen through the windows of Rinchin Dorjay's house at Yurutse. Photograph by the author.

Back at the other end of the sonic spectrum, infrasound as an object of study got a substantial boost with the need to monitor nuclear testing that began in the early days of the Cold War, and we need to remain aware of how attentive sensible formations come into being and are activated as real networks.[3] For example, the ubiquitous drone shots that now feature in many documentaries make use of identical technology to that developed and used by the military for surveillance and destructive purposes (Fish & Richardson, 2022). Given that "we make our tools and our tools make us" we need to be vigilant of the kinds of networks of attentive sensibility created and foreclosed by mediating technologies, their infrastructures, economics, politics, resource consumption, depletion, pollution, etc., and the implications of all these for using those technologies for anthropological ends, including those of sensory research. But sticking with the senses methodologically does reveal a range of considerations around the generation and mediation of mountain resonance that I now want to consider in a specifically Ladakhi context.

Ladakhi sound worlds

My own interest in infrasound began with trying to understand my sensory experience of mountain resonance, and alongside this I was also having conversations about that mountain environment with a Ladakhi friend, Rinchin Dorjay. Rinchin lives with his extended family for much of the year in a relatively isolated house, by Ladakhi standards, which is the former residence of an *amchi* (healer). The house is called Yurutse and is situated in a range of mountains close to several springs that continue to be used by people from nearby villages for their healing properties. Although Rinchin now makes a living solely by catering for domestic and foreign tourists staying overnight—his house being on what has become a popular trekking route—he was previously a shepherd. His experience of landscape has changed from that of a herder with a particular kind of intimate lived knowledge of the mountain environment, to a tourist host and I was interested in the way this was a shift not just in economics, but also in sensible attentive formations. I was concerned with understanding what his experience of the mountains used to involve, and whether and how that had shifted. Although they are not necessarily discrete worlds—they intersect, merge, and continually change in many sensory ways—the existence of different formations of sensory experience and attentiveness, soundworlds, is a way understanding contemporary changes to Ladakhi landscapes.

Rural Ladakhi lives are entangled with mountain environments in many ways—practically, sensually, economically, religiously, etc.—and the sonorous experiences involved with being a shepherd were something that Rinchin definitely missed: the sounds of the bells on his flock of Changthangi goats (the source of pashmina wool) and the sounds of the winds and rivers, etc. Many Ladakhi horsemen take particular pride in attaching finely tuned brass bells to their horses—each with a slightly different tone so that there is a literal music to their movement—and there is discussion of the sonic qualities of particular groups of horses. As an anthropologist, I was interested in the sensory qualities of Rinchin's soundworlds—both previous and contemporary—and there were many conversations initiated by our collaborative attempts at various kinds of sound mapping.

> Before I used to spend all day in the mountains with the goats. I can tell where I am and where the goats are because of the sound even when I cannot see them. You know where they are—which valley they are in by the echo. . . . You can feel where they are . . . if the bells stop then I am worried because the goats are worried about

> something—so I have to go and look. There are particular sounds in places—so I know where I am—I always hear the wind round the corner [*where a narrow valley branches off the main one*] and you can tell the time by when the wind changes or the stream is bigger [*there is often a strong wind in the early evening as the result of a significant temperature shift, and the streams that are fed by glacial meltwater reach full flood in the late afternoon as the volume of water increases after melting during the day*]. In the winter the streams are mostly frozen so the sound is different, then you hear the wind differently. . . . You can hear the mountains. . . . Now I only hear those sounds when I go down for supplies, but I used to live with them all day.
>
> *(Rinchin Dorjay)*

The occasion of a visit to Rinchin's house by a local Tibetan Buddhist lama to perform an annual purification ritual involving chanting and drumming prompted further discussions of the importance and effects of sonic experience this time in relation to religious chanting.

> It is important that the prayers are spoken *in* the house. You cannot do them in another place—they have to be here and you have to listen to them. It is no good to do them in a different place—they have to be done in the house. This sound will clear away all the negative energies and purify the house. It is important that you must hear and feel the sound and the prayers . . . you must join with them—move with them. You can feel they are working through the sound and vibration.
>
> *(Rinchin Dorjay)*

Although there is no space here to really consider Rinchin's astute theoretical understandings of the soundworlds he used to inhabit on a daily basis, or the material dimensions and efficacy of sound in a Tibetan Buddhist ritual setting, there is a strong sensory focus on the lived experience of sound as an important affinity between them.

The particular style of chanting practiced by Tibetan Buddhist monks can generate sounds as low as 30 Hz and the large horns (*dungchen*) that are also used in religious rituals are often paired to produce resonant harmonies; notes that are not "played" but are the result of sonic frequencies intersecting with each other. When played in situ on the rooftops of monasteries in mountain locations, *dungchen* resonate over long distances up valleys. In the process of chanting, monks are also meditating on the sounds that embody Tibetan Buddhist notions of emptiness, and in 1967 the US anthropologist Huston Smith studied monks formerly from Gyuto and Gyume monasteries in Tibet who had then settled in Dharamsala, India, and reported that when he took those sound recordings to a sound engineer at the Massachusetts Institute of Technology in the United States, the engineer declared that the sounds were "not humanly possible" (Smith, 1967, p. 210). The monks' chanting was at the same frequency as that of a double-bass and they also generated multiple notes all at once across three separate octaves. These sounds are sometimes technically referred to as overtones: sounds above the fundamental frequency. Bass frequency chanting can produce audibly higher frequency sounds as the soundwaves interfere with each other. Some of the bass sounds generated by this kind of chanting are at the threshold of human audibility, and the overtones produced can be experienced as sounds without obvious generators. Chanting monks themselves have a different sonic experience than audiences as they are hearing the sound, feeling its resonance, within the density of their own bodies.

The monks that Huston Smith was listening to were producing sonic overtones, many of which are sensed in other ways than audibly, and the sleeve notes accompanying the 1967 Anthology Record and Tape Corporations vinyl release of their chanting is worth quoting at length:

> Sensed without being explicitly heard, overtones stand in exactly the same relation to our hearing as the sacred stands to our ordinary mundane existence. Since the object of worship is to shift the sacred from peripheral to focal awareness, the vocal capacity to elevate overtones from subliminal to focal awareness carries symbolic power, for the object of the spiritual quest is to experience life as replete with overtones that tell of a "more" that can be sensed but not seen, sensed but not said, heard but not explicitly. Ultimately, though, for the Tibetans these chants are spiritual technology. Reality is energy, energy is waved, waved energy is sound. It follows that reality is sound, and the question for us becomes, which wavelength is our life vibrating on and therefore sounding. In these chants, the lamas are modulating their lives to the wavelengths of the gods, tapping into their power and transmuting that power to others. Reciprocally, they "feed" the gods with the sound which in a very real sense is what those gods are.
>
> *(Anthology Record and Tape Corporation, 1967, sleeve notes)*

Although a statement like this has very much to be read in terms of its own particular context and historical moment, it does suggest ways to think about the multiple roles sound might play in Ladakhi religious experience. In all my conversations with Rinchin (and I don't have the space here to properly register the subtlety or brilliance of his explanations) about changes to his sonic environment and the qualities and aims of Tibetan Buddhist chanting, he suggested that ideas of "feeling" and resonance were one key component of Ladakhi understandings of both mountain landscapes and religious experiences.

At another point in this ongoing research, I had conversations with Ladakhi youth in the main urban center Leh about music, and in particular death metal which is popular with Ladakhi teenagers. Langdarma and rBapho are a contemporary Ladakhi death/doom metal two-piece band who occasionally use *dungchen* in their music and make explicit references to Tibetan Buddhist culture and philosophy on their Bandcamp website (Langdarma and rBapho, n.d.). Their band logo blends Tibetan Buddhist imagery with the kinds of stylized script lettering that is ubiquitous to band logos in this musical genre. Although there are ways in which Ladakhi death/doom metal bands appropriate elements—sonic, visual, material—from the genre's form in other cultural contexts, there is a definite desire to give it a specifically Ladakhi edge.[4] The mountains of Ladakh often feature as a backdrop for videos posted on YouTube by contemporary Ladakhi bands and they were frequently referred to as one specific creative catalyst for musical inspiration in conversations with those involved in the music scene in Leh. What also struck me in conversations with Ladakhi fans and players of death/doom metal were some energetic affinities between their descriptions of the sonic experiences of making or listening to that music, and my earlier discussions with Rinchin.

> The music—you feel it—you all feel it—it's what it's about—it moves you, takes you away [*makes hand movement*]. It's huge. . . . Sometimes you get totally lost in it you're so into it—it's like it's beating you . . . physical . . . it's like this massive weight.
>
> *(Tsering Tamchos)*

One of the issues facing contemporary Ladakhis is the future sustainability of rural lifeways and economies in the light of various changes, including human-made environmental changes like glacial retreat. This slow-motion crisis, alongside the intergenerational and other social issues such as the increasing movement of young people from rural villages to urban centers, and the changing attitudes of contemporary youth to their Tibetan Buddhist heritage were all of central interest to most Ladakhis I talked to during my research. Through discussions with other friends in Leh that are involved with media production (I taught some digital filmmaking at the Ladakh Arts and Media Organisation [LAMO]), the idea of the lived experience of soundworlds emerged as one specific way of connecting up some of these concerns and tracing affinities between them: the sensory experience of mountains, the religious aspects of Tibetan Buddhist sound practices, and the sonic and immersive qualities of death/doom metal.

The most recent iteration of these discussions has revolved around the possibilities of creating a three-screen audiovisual installation that would sonically trace lines of connection between all three soundworlds. Although it has, as of this publication, yet to be realized, the idea collectively arrived at is to have a digital projection onto a screen showing footage of a vast Ladakhi mountain landscape with clouds slowly drifting across it. This central screen would sit between, on the left, a screen depicting slow-motion footage of the audience at a death/doom metal gig in Leh with strobe lighting and, on the right, a third screen depicting slow-motion footage of Tibetan Buddhist monks chanting and drumming. The timing of the movement would be effectively synchronized across all three screens, and they would be sonically "connected" by low resonant frequencies that would move from one screen to another—modulating in tone in minor ways as the sound shifts.

The collective idea that some of the sound involved in this installation should be constructed from infrasound and overtones, alongside the slowed-down bass of death/doom metal, presents technically challenging problems but also raises potentially complex issues around the kinds of "resonating with" discussed earlier. Infrasound is technically complex to produce but, even if that could be overcome, there were concerns expressed around the creation of a digitally displaced context for reproducing Tibetan Buddhist chanting. Chanting is supposed to be conducted only within a religious context, and there were doubts about its reproduction in a non-religious setting. The notion of involving audiences in directly resonating with all three soundworlds, experiencing how they are connected, was seen positively, especially in the way that might make viewers/listeners feel those sensible networks, but thinking through how to realize it technically raised some conflicting and as yet unresolved views.

This collaboratively arrived at iteration/visualization of the ways in which these three soundworlds might be linked through relayed sensory affinities creates new ways of imagining their connectedness, and my collaborators envisaged it—and the experience of it by Ladakhi audiences—as a way of initiating important conversations about possible futures. These fields of Ladakhi existence can be creatively reimagined as resonating together. Reimagining the death/doom music and the religious chanting within the broader scope of terrestrial sound dynamics—the resonance of mountains—brings with it the possibility of shifting attentive formations. Paying attention to these particular sensible dynamics at a time of catastrophic climate and environmental change is an urgent and necessary task toward imagining sustainable Ladakhi futures, and drawing these lines of sonic connectivity is to draw various "correspondences" in Ingold's use of the term (Ingold, 2016). To sonically experience mountain resonance, or Tibetan chanting, or a death/doom metal gig, is in some way to sensually "join

with" those entities, and the bass frequencies that connect all three are a creative methodological tool for exploring their mutual entanglement.

Methodologically, maintaining a focus on sound as sound—staying with the senses—has been really productive in the context of this ongoing research. This has implications for how anthropologists continue to engage with the senses both in practice and theoretically. It is through staying with the senses in significant ways that the theoretical and other connections between the three soundsworlds in question here are made apparent. It brings some of those connections into view, it makes audible those attentive sensory affinities, and in doing so will hopefully form one starting point for further discussions about Ladakhi futures. In the light of current anthropological concerns for addressing pressing issues like environmental change and developing new ways of working with the more-than-human, we need to be vigilant and continually examine attentive formations, but also take a more creative practice-based methodological approach to researching and understanding sensory experiences.

Notes

1 The research on which this chapter is based was generously funded by a Major Research Fellowship from the Leverhulme Trust "A Life More Photographic" that was focused on practices and experiential understandings of digital photography in the UK and elsewhere.
2 See Parikka (2015) and Cubitt (2016) for excellent discussions of some of these issues.
3 For a powerful discussion of the historical application of military technology to cinema, see Paul Virilio's "War and Cinema" (Virilio, 2009). In a specifically anthropological context, the development of lightweight camera equipment by Drew Associates—which enabled Direct Cinema in the United States, Observational Cinema in the United Kingdom, and cinéma vérité in France—was partly a result of Richard Leacock's experiences in a mobile US army film crew in World War II, and the technological advances in camera equipment instigated by the war.
4 For a discussion of some of the issues around metal music considered cross-culturally, see Brown et al. (2016).

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25

SENSORY ENGAGEMENTS WITH LIVELY DATA

Attuning to the convivialities of more-than-human worlds

Deborah Lupton, Ash Watson, and Vaughan Wozniak-O'Connor

When people go online or use mobile devices, constant flows of digitized information are created and circulated about their bodies and health states, resulting in digitized and datafied bodies. Massive digital datasets are continually accumulating masses of personal details of people's experiences of health and illness, including online medical records, self-care devices and apps for mobile devices that facilitate the tracking of bodily functions and activities, and websites about health and illness such as patient support discussion forums and groups on social media platforms. In the Australian Research Centre of Excellence for Automated Decision-Making and Society, our team focuses on identifying the social imaginaries, affective forces and practices surrounding existing and emerging digital health technologies. We are exploring how digitized information about people's bodies and health states is generated with and through their engagements with these technologies.

In our research program, we adopt a more-than-human approach that focuses on the many and varied digital and non-digital forms that information about health and bodies take. We are interested in health data as they are made and imbricated in the objects and activities of people's everyday lives (Lupton, 2019a; Lupton & Maslen, 2018) and aim to expand the human-centric approach offered in digital health by positioning human health and embodiment as always imbricated within more-than-human ecologies (Lupton, 2022). This perspective includes taking account of the sensory, embodied, and material forms that health information takes: marks on the body, feelings, sounds, scents, details relayed in conversations or gauged from practices, and environments. In our project, we use the term "lively data" to describe the information and marks left by humans and other living things as they move, grow, age, die, and decay, constantly changing form and entering into new more-than-human assemblages. These forms of information are generated and responded to in multisensory, multimodal ways, as the affordances of human bodies (their capacities for sensory engagement, for learning, for memory, for responses to the world) come together with the affordances of other living creatures and with non-living things (both digital and non-digital).

In this chapter, we describe processes of facilitating more-than-human sensory engagements with lively data and enhancing people's attunement to this expansive perspective

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on digital health. Our approach to sensory ethnography brings together arts-based, creative, and interactive research methods for participant engagement and research translation, aligning with the sensory pedagogical (Fors, 2013) and sensory museology (Howes, 2014) approaches. In what follows, we discuss the methods we used in the "Creative Approaches to Health Information Ecologies" project, which in turn contributed to the production of a short film (made by a commissioned independent filmmaker, Edmund Renew) for showing at our "More-than-Human Wellbeing"[1] exhibition.

This exhibition, designed for research-creation and public engagement and research translation, rested on the standpoint that human states of embodiment, health, and well-being are always entangled in the complex dynamics and materialities of planetary health. In addition to offering a way to creatively communicate our research findings and theoretical concepts to a public audience, the exhibition had a specific pedagogical purpose, seeking to attune visitors to the connections between non-humans, humans, and more-than-human vitalities, to interconnected relationships and distributed well-being. We sought to expand thinking about how we can learn about our bodies and health states by developing strong links between the materialities of our fleshy bodies and those of other living creatures as well as with the non-living things with which we share place and space. We wanted to stimulate thinking about how "data" or "information" about health and well-being include the marks that human bodies leave on the more-than-human world, how the materialities of existence leave marks on and with people's own bodies, and how their practices of living in and moving through the word are shaped and reconfigured as they come into relationships with various arrangements of the ecosystem. We were thereby working toward developing more positive futures of mutual flourishing in which automated and other digital technologies and the digitized information that they generate are just one element contributing to people's understandings and practices related to their health and well-being and that of the ecosystem.

The "More-than-Human Wellbeing" exhibition had a deliberate and direct focus on the more-than-human and more-than-digital sensorium (Lupton & Maslen, 2018). The broader context of the exhibition is the climate crisis that is facing the planet and the dissociation that many people (particularly those living in the Global North) have from other living things and the environment. As such, our exhibition also takes inspiration from work in which arts-based and museum curation methods are employed to draw attention to the intertwining of people and environments. We acknowledge that all environments are entangled with humans, and that to a greater or lesser extent, all are configured with and through the often exploitative and extractive practices and ideologies of humans living in post-Enlightenment societies in which humans are positioned as superior to and autonomous from other living things. Our exhibition challenges these human-centric assumptions and calls for greater recognition by people in societies such as our own of their kinship with other creatures and the geographical and elemental agents that comprise ecologies.

Surfacing, portraying, inviting, and attuning people to the sensory aspects of these connections, relations, and agencies were integral to our endeavors. We presented our research insights from sensory ethnography in material artifacts and artworks and designed interactive activities for visitors to further explore the sensory dimensions of health information ecologies using their own bodies. There were also elements of sensory pedagogies incorporated within our exhibition design. As part of our attempt to share our research findings and insights, together with our more-than-human conceptual standpoint, as well as making the short film for display, we created a series of artworks, a zine, interpretation texts, a booklet, and interactive exhibits. This assemblage of materials, all created bespoke for the exhibition,

offered a lively environment for people to consider how their relational connections with these more-than-human worlds can be strengthened in the interests of convivial flourishing. We wanted to make our visitors respond and feel as they moved through the show—touching, viewing, smelling, or listening to the materials on display. In this way, sensory ethnographic methods of research have underpinned the concepts with which we are working in the exhibition and the materials we have made for display.

The "Creative Approaches to Health Information Ecologies" project was undertaken in partnership with Health Consumers New South Wales (HCNSW). This not-for-profit community health organization focuses on facilitating people's engagement with the healthcare sector, with the goal of promoting a greater public say in how healthcare is delivered to achieve better health outcomes. In what follows, we provide details on the online workshops we conducted with members of HCNSW with the aim of inspiring them to consider how they learn about their bodies and health states through their multisensory affective encounters and gatherings with more-than-human agents. The insights from these workshops provided the basis for the short film made for display at our exhibition. This film was designed not as a documentary-style audiovisual output but rather as a creative interpretation and translation of our empirical research, using lyrical imagery and soundscapes to bring to the fore the affective and sensory dimensions of people's responses to the cues we offered them in the workshops. We begin with providing further details on the conceptual approach to our project and then discuss how we conducted the workshops and used the participants' responses in developing the film.

More-than-human digital health: thinking with living things, place, and space

A major dimension of our project is reimagining the scope of terms such as "data" and "information" about health. The concept of "lively data," relating to personal digital data about humans' bodies and lives, underpins our thinking. Digital data, as originally conceptualized by one of us (Lupton, 2016), is lively in four dimensions: (1) these data are dynamic, constantly changing and recombining as people go online or use mobile devices; (2) these data record the (often intimate) details of people's lives, including their feelings, behaviors, and movements in space; (3) people can use these data to contribute to knowledge about themselves or make changes in their lives; and (4) the data contribute to human livelihoods by generating profit as part of the flourishing digital data economy (Lupton, 2016). Personal digital data can be viewed as human remains or as parts of bio-economies, similar to human bones, cells, tissue, gametes, or organs (Lupton, 2019a). As we formulated our project, we drew on this understanding of lively data and added a fifth dimension of liveliness: (5) these data generate knowledges about other living things that are part of more-than-human worlds.

Our concept of "more-than-digital" health also brings in the more-than-human dimensions of people's enactments of digital health (Lupton, 2019a, 2022; Lupton & Maslen, 2018). We are not simply interested in how people learn about and understand their bodies and health using digital devices and software. We want to investigate the multidimensional and multisensory engagements that humans have with other things, places, and spaces as they move through their lives: as their bodies grow, change, confront challenges to their health and well-being, recover or live with chronic conditions or disabilities. Digital technologies may play a role in these more-than-human assemblages of health/well-being/life

but there are infinite other possibilities for how humans can come together and come apart with things and places. We build on Barad's (Barad, 2007; Barad & Kleinman, 2018) notions of "onto-ethico-epistemology" and "intra-action" to position digital health data assemblages as entangled gatherings of humans with non-human agents (Lupton, 2019c, 2022; Lupton & Maslen, 2018). These ideas view agencies as always relational rather than the inherent property of any one agent (human or otherwise). Agencies are created through intra-actions when agents come together or come apart in assemblages. In digital health assemblages, these agents can include, in addition to humans and digital technologies and digital data, other living things, non-living things, and place and space (Lupton, 2019a, 2022). These assemblages are therefore both more-than-digital and more-than human, as are the agential capacities, affective forces, and relational connections that emerge from the intra-actions of the agents that form digital health assemblages (Lupton, 2019c).

Another key word in our research-creation and translation practices is "enchantment." Drawing on Jane Bennett's *The Enchantment of Modern Life* (2001), we seek to find ways to help people become enchanted with the potentialities of deepening their understandings of their bodies' intertwinings with nature and the pedagogic possibilities that exhibition materials and curated creative activities can offer. Bennett (Bennett, 2004, 2009) also refers to "thing-power" when describing the forces and connections that more-than-human assemblages can generate. Enchantment is one of these forces. To some extent, people have become enchanted with the seemingly magical affordances offered them by digital technologies such as apps and wearable devices, and these things' apparent ability to "know" and "sense" their bodies and health states better than humans' fleshly affordances (Lupton, 2018, 2019b). With our research-creations, we want to inspire people to rethink these forces and connections: to find enchantment in the ways that other-than-digital agents can gather with humans, create knowledges, and intensify the forces and agencies that lead to better health and well-being.

Donna Haraway's notion of compost-ism, her post-cyborgian development of the ways in which humans and other things are entangled and co-evolving, is also central in our thinking. Haraway has declared that she is not a posthumanist but a compost-ist (Haraway, 2015). By this statement, she means that she sees all agents in the world as richly interconnected ecosystems, including biological agents and microorganisms, rocks, soil, clouds, stars, and water but also human-made things. We wanted to take up this metaphor of compost—a complex dynamic matter comprised of materials that are in the process of breaking down to reform into other materials—as a key inspiration for our research-creation. Incorporating our approach to lively data into compost-ism, we can view digital data and devices as part of compost materialities, forever composing and decomposing into new, rich, and vibrant matter (Lupton, 2019a). Compost-ism can also be viewed as processes of research-creation, research translation, and environmental pedagogies (Neimanis & McLauchlan, 2022). The driving concept behind our project is compost-ist in seeking to highlight humans' emplaced, embodied, and multisensory engagements. We feed into our composting process many vibrant agents: our own experiences, ideas, and feelings as we have lived and moved through the world, the words expressed and artifacts made by our co-researchers/participants, our reading of related academic literature, our consideration of and inspiration incited by artworks and museum exhibitions, and many more capacious sources. We also see our research translation and engagement activities as part of this lively concept of compost-ism, as we strive to include others' ideas and reactions into iterations of our research-creation processes.

In her work, Haraway (2015) often uses the word "kin" to describe the non-human agents in the world with which we have relational and affective connections. Part of what we are trying to do with our project is to highlight this understanding of kin and the importance of "making kin." First Nations, non-Western, and pre-Enlightenment Western cosmologies have long acknowledged the kinds of vibrancies and distributed agencies that are part of more-than-human "manifestings" of kinships, and called for all humans to adopt the role of stewards of the ecosystem (Hernández et al., 2020). First Nations Australian cultures use the word "Country" to encapsulate this perspective (Bawaka Country et al., 2015). The focus on relationality and reciprocity in concepts such as compost, kin, and Country means that ways of thinking and doing encompass attention to the well-being of all entities in the ecologies in and through which humans live and move. First Nations Australian Lauren Tynan argues that maintaining a balance and connections in these ecologies is of vital importance for all agents within them. As custodian, humans must recognize that Country is grieving or hurting when the balance is unsettled, such as when bushfires and floods occur, or biodiversity is lost. These are intensely affective and multisensory engagements with Country. Tynan provides a compelling example of how the bushfires that ravaged large parts of Australia in the 2019–2020 Black Summer incinerated over a billion animals and seven million hectares of land into choking black smoke, which in turn was smelt, viewed, and inhaled by Australians living nearby or even far away, due to the currents of the air. She describes this black smoke as "the ashes of our kin . . . . In this new relationality of Sky, animal kin floated in the air and into our bodies" (Tynan, 2021, p. 602).

Sensory museology practices emphasize the multisensory engagements that visitors to museums have with the artifacts on display. Museum exhibits have traditionally been designed and presented (often protected in glass vitrines) as curios, artworks, or scientific specimens that should only be viewed, or in some cases listened to, but not touched, smelt, or tasted. Recent directions in museology, however, have begun to highlight the opportunities afforded by engaging as many senses as possible in the visitor experience: particularly that of touch (Howes, 2014). For their part, scholars working in pedagogy have begun to emphasize the possibilities of learning through the senses, including in museum settings (Fors, 2013). Such a sensory approach, indeed, was the basis of the first museums of the seventeenth and eighteenth centuries, in which visitors were encouraged to handle the artifacts on display so as to better learn from their experience (Howes, 2014). It is here that the concept of the more-than-human affordances can be useful. The affordances of artifacts, including the ways they are presented to exhibition visitors, can be brought together in vibrant ways with the sensory affordances of human bodies, so that the "thing-power" and enchantment of the exhibition assemblage can be fully realized. These affective forces, generated with and through sensory engagements and responses, can inspire sensory pedagogies that open capacities for new ways of thinking, doing, and responding to the more-than-human-world. Sumartojo (2019) refers to these experiences as creating "sensory impact," where the senses and other embodied feelings, memories, affective forces, and imaginations of visitors generate new knowledges in ways that can leave traces (memories, new understandings) on the body.

Museum exhibits about people's experiences of embodiment and health and their entanglements with nature have been significant sources of inspiration for us. The 2022 "Eucalyptusdom" exhibition at Sydney's Powerhouse Museum presented historical artifacts, film, newly commissioned artworks, soundscapes, and smellscapes to create an immersive experience recounting narratives of the mighty eucalyptus species (known as gum trees in Australian

vernacular) and its significant role in the deep and recent histories of life and national identity in Australia (Powerhouse Museum, 2022). "Kill or Cure: A Taste of Medicine" exhibition held in 2022 at the State Library of New South Wales (State Library of New South Wales, 2022) spanned the history of Western medicine from the fifteenth century to the nineteenth century. The exhibition spaces presented a combination of collections of illustrated medical books, antiquated medicine bottles, and surgical instruments with creative representations of how bodies and disease were imagined and treated across these centuries. The history and application of the humoral model of medicine and herbal medicine was portrayed, together with the early stages of the development of scientific medicine. These displays provoked us to contemplate the emergence of practices in our era to digitize and datafy human bodies in the context of creating and applying medical expertise. Given the focus in the humoral model of medicine of understanding the interconnections between inherent properties of human bodies (the relative proportions of yellow bile, black bile, blood, and phlegm) with aspects of the environment (the seasons, the climatic conditions, and heavenly bodies and how they expressed the four base elements of fire, water, air, and earth) (Hartnell, 2018), we pondered whether this conceptualization of embodiment could be recuperated in our envisaging of a contemporary more-than-human understanding of health and well-being.

We are also inspired by artists who have addressed humans' encounters with the environment, seeking to highlight our embodied and multisensory relational connections with nature. "Water Rhythms: Listening to Climate Change," by artist Susie Ibarra and scientist Michele Koppes (2020), presents sonic waterfall installations of compositions created from recordings of glaciers melting, using sound art to document the effects of climate change. With these installations, they seek "to engage in a deeper contemplation of the ways in which we are all intertwined by freshwater, its beauty and fragility." In another example focusing on water, a video installation in the 23rd Sydney Biennale, entitled "Deep Down Tidal," exhibited as immersive multichannel projections, Tabita Rezaire drew attention to water as a form of memory and information archiving and processing. In her artist statement, Rezaire noted:

> Research suggests that water has the ability to memorize and copy information, disseminating it through its streams. What data is our world's water holding? Beyond trauma, water keeps myriad of deep secrets, from its debated origin, its mysterious sea life of mermaids, water deities, and serpent gods, to the aquatic ape theory.
>
> *(23rd Biennale of Sydney, 2022)*

As Rezaire points out, non-human agents such as water are repositories of data and knowledge. So too, we can think of our own bodies as well as those of other animals in these terms. Digital technologies can access some of humans' and other animals' fleshly ways of being and knowing. Like companion species and their humans, digital data are lively combinations of nature and culture (Lupton, 2019a).

It is these philosophies and embodied/sensory acts of making that we are finding increasingly generative and vibrant when considering how people learn, think—and crucially, feel—about their bodies and health. Bringing together our expertise in non-representational, multimodal, and multisensory inquiry is our attempt to move beyond the bounds of a rationalistic—indeed, often bloodless or fleshless—approach to health literacies and health pedagogies which tend to pervade the academic literature. Our approach also allowed us to expand beyond the human-centric approach to health and well-being that dominates discussions of digital health (Lupton, 2022) to move into the realm of

environmental and sensory pedagogies and creative making practices. The project's conceptual questions are as follows:

- What are the connections we can draw between the data from human bodies and the marks left by human bodies on other things? What can we learn about these connections in terms of our part in more-than-human worlds?
- How can we make these connections through the multisensory attributes of the exhibition materials and artworks?
- How do these multisensory engagements make us think and feel about how we learn about our bodies and health and what we value about these ways of knowledge?

The following are the key questions we would like exhibition visitors to explore:

- How is your well-being entangled with that of other people and with objects and places, both natural and human-made, digital and non-digital?
- What traces does the world leave on you, and what traces do you leave on the world?
- How is this information shared or transmitted between you and the world?
- How do you learn about your body and your health and well-being through your interactions with other people and the world?
- How can we conduct our lives so as to promote mutual health and well-being with other people and with the ecosystem?

Using sensory cues to rethink and reestablish connections with more-than-human worlds

After collaborating with our community partner HCNSW on the project design, consulting on recruitment strategies with a consumer advisory board established for the project and gaining ethics approval from our university human research ethics committee, we worked with this organization to recruit research participants through their extensive networks. We held a total of seven workshops online via Zoom, which each lasted for one hour and involved a total of 27 participants. The workshops included two creative activities (outlined in detail elsewhere, see Watson et al., 2023). In our second activity, "new metaphors for health information," we built on the premise of Lockton and colleagues' "New Metaphors Toolkit" (2019) and brought this together with the concepts about more-than-human health ecologies outlined earlier. Based on design practice research, Lockton and colleagues' new metaphors approach seeks to inspire novel ways of thinking about objects by using a range of photographic images and asking people to find new connections between seemingly disparate phenomena. We used the Padlet digital platform to curate a series of approximately 40 photographs taken by members of the research team (Lupton and Watson), featuring living things or nature spaces (or marks left by living things) such as waterways, the sky, trees, fallen leaves, and footprints (see Figure 25.1). We chose these images to invite participants to think otherwise about how they learn about and felt health and well-being and to cultivate thinking about their connections and kinship with the ecosystem, eliciting impressions, memories, and symbolic connections.

During this activity, we shared our screen and showed participants the images on the Padlet, scrolling slowly through them. Participants were asked to select and discuss images that drew their attention, that they could relate to health information in some way. We explained

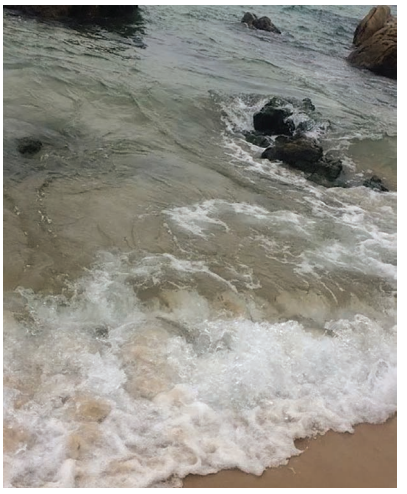

Figure 25.1 Images on Padlet used for the new health information metaphor activity.

that this was a creative free association task to explore some different ways that we might think about and talk about health information and that we wanted to know how these images made people feel.

This activity elicited some vibrant responses from the participants: often with poetic phraseology that captured their sensory and affective feelings. They mused on how the images inspired thinking about the complexity and mystery of good health and well-being. For example, images of trees helped them imagine the opportunity for renewal and growth, offering hope.

> The forest, so many things growing there, if only we could understand it. It's like my health to me.
>
> The tree with the different colour that is growing tells me that world is made of many different complex things.
>
> With the trees, the tree trunks it's not centred, it's not symmetrical. It's not perfect, it's tangled. And that's what life can be like. Life isn't just perfect, you know. Often things in life don't finish up the way we want them to.

Viewing the tree images also led to thoughts for some participants about the time span over which trees thrive and survive, and how much of the world they have experienced.

> The trees are so old, they would know so much. And I wonder how many [growth] circles it would have if you cut it open, which I don't want to do. But to see how it's had such a long life.

There are strong themes across the participants' responses to this activity. Despair at feeling ill or not being able to find a cure for illness and feeling ignored by medical professionals were expressed as people articulated how the images made them feel. Yet, participants also found much to lift their spirits or find a sense of hope or moving forward in these images, expressing possibilities for positive change and renewal or at least a philosophical recognition that the journey of life is complex and dynamic. The set of images also inspired in some participants' reflections on the importance of connection with the natural environment, the role humans should be playing as stewards, and the recognition that human health and well-being are entangled with that of the planet. These thoughts and feelings were most clearly articulated in two participants' words, who were in discussion in a group together: the first an older man, the second a young woman.

> There's a lot here for me. So much of these images are all about connecting with nature, connecting with the earth, connecting. For me, that connecting with nature is still important. Even though I'm from a European background, it's because Australia is my home and there's images, of just the life of nature and the outdoors and how things grow and the bird life and the trees. And again, it reflects our own life, because things grow, and they live, and then they age, and they end their life. But importantly, they don't end their life—because with nature, as I believe, with our ourselves, energy can't be created nor destroyed. So there is an ongoing impact that these sorts of messages have for me, as in the trees that are dying or already dead, provide shelter for other animals, etc., so that that's what I'm getting out of this. How does that relate to health? I think it relates to just general positive well-being and good mental wellbeing.

> I think climate change is probably one of the biggest public health issues we are facing. I think it's just like, you know, our health is not separate from the environment. You know, there's a reason we feel better when we're in nature. I think we're so intrinsically linked to it, and we should think about caring for the environment the same way we think about caring for our own health. Because at the end of the day, you know, if we don't stop climate change, we're going to have more bushfires, we're going to have more floods. And that, you know, air quality like having clean water, having clean air, that is what's going to keep us healthy. So I think, you know, it's really important that we see ourselves as intrinsically connected to nature, it being such an important part of our health.

The responses to the "new metaphors" creative activity enabled viewing health information through a different lens: one that inspired thinking about the relational connections and capacities opened by intra-actions with agents such as plants, clouds, birds and feathers, bodies of water, and soil. In walking in our neighborhoods with our mobile phones ready to capture images of the landscape, we were attuning ourselves to how the sensations and configurations of light, air, place, and space were enchanting and intriguing us, and selected these images for our workshops drawing on our felt understandings and intuitions about what might inspire generative conversations with our participants. In turn, we used our senses and affective feelings to review these conversations and decide how we would materialize our participants' responses to these visual cues in the format of a short film. These reflections, and most of the others expressed by our participants as they responded with their bodies and their words to the images we showed them, were transcribed and then used by Lupton to create the script for our film. She arranged the participants' words thematically and in ways that allowed comments from different workshops to relate to each other. To help the filmmaker create a compelling and enchanting audiovisual interpretation of the workshop responses, she used our Padlet images to illustrate their narratives in the script, so that the filmmaker could directly see to what image cues the participants were responding. Throughout this process, she was thinking about which moving images and sounds from nature she would ask our filmmaker to capture to fit with their words.

This combination of image and words, together with an introduction explaining the project, was handed over to Edmund Renew, the filmmaker. Members of our team and others from our research center who kindly volunteered came together in a studio with Renew and his sound recording technician to read excerpts from the script that were then layered over visual images and incorporated with sounds captured by filmmaker. In revoicing the participants' words for the film, we used our bodies and senses to try to invest their insights with meaning—responding in our own interpretive ways to the images and words in the script. The resultant film[2] brings these sensations, imaginaries, poetics, and images together in the attempt to enchant our exhibition visitors and help them see and hear the sensory and affective forces that enlivened our discussions with our participants. The film will be displayed in the exhibition space, continually looping and filling the space with lively images and sounds. Together with the other exhibition materials and related hands-on activities for visitors, the film is designed to both encapsulate our participants' thoughts and feelings as they responded to our visual cues, and to invite others to consider their positioning within more-than-human health ecologies, creating a life-affirming, convivial, and affectively intense atmosphere.

Conclusion

The approach we have outlined in this chapter contributes to understandings of the sensory dimensions of digitized forms of information about human bodies and health states and how these ways of knowing and feeling are intertwined and relational with other sensory modes and materializations. The "Creative Approaches to Health Information" project, and the exhibition to which it is contributing, offer a version of sensory ethnography that involves us as researchers using our senses in a variety of creative ways, seeking to elicit sensory engagements from our research participants, contributing to our exhibition materials ideation, and making and informing how we are attempting to inspire sensory engagements in visitors to our exhibition. With these materials and activities, we will seek to enchant attendees with the possibilities of strengthening their relational connections and kinship with other living things and the affective forces of place and space.

We are working toward a contemporary refashioning of the humoral model of medicine, which recognizes the flows of vibrant vital forces and substances as they move in and out of the fleshly human body and intra-act with more-than-human ecologies. In this refashioning, in addition to the traditional elemental agents of air, wind, water, and fire, the living and non-living phenomena constituting and inhabiting place and space, and the temperamental forces that animate humans' bodies, we can begin to include the phenomena of digitized forms of information that contribute to multisensory experiences of the world. We are attempting to show how these forms of knowledge intra-act with each other to generate thing-power and open capacities for action.

Sensory ethnography methods were key elements in our research-creation, as were the aligned approaches of sensory museology and sensory pedagogy. In deciding how we were going to engage our research participants and exhibition visitors in "thinking otherwise" about their relational connections to creatures and objects in ecological systems, we drew on our own embodied knowledges and sensations of these more-than-human worlds. These practices and materials bring together a vibrant sensory ethnography/museology/pedagogy/impact assemblage of human bodies, objects, digital data, feelings, and forces. They represent one way of rendering the intangibility of such phenomena as affects, data, imaginaries, and memories into materializations that inspire the kinds of forceful multisensory responses that can deepen human connections with the more-than-human worlds in which they are located. We acknowledge that each exhibition visitor will engage with the materials using their sensorium in unique ways that are founded in their individual life experiences, sensations, and memories. We have used our own sensory knowledges and experiences to manifest a convivial atmospheric space for feeling and learning, and hope that we have done so well enough so that visitors will find something intriguing and moving as they engage with our research-creations.

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Notes

1 https://dlupton.com/.
2 https://www.youtube.com/watch?v=aaPf_WevkwI.

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PART 5

Non-representational sensory ethnography

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26
SOUND WALKS

Tim Ingold

There is an old philosophical riddle that goes like this: "If a tree falls in the forest and no one is there, does it still make a sound?" The answer, of course, is that it all depends on what we mean by sound. If we mean mechanical vibrations emitted from an energetic source, within a certain frequency range, and transmitted through a conducting medium, then surely the falling tree will make a sound as its heavy trunk strikes the ground, sending shock waves through both earth and air. But if by sound we mean a certain human perception brought about through the stimulation of a particular sensory organ, the ear, and the receipt of neural impulses by processing centers in the brain, then, clearly, there can be no sound without someone with ears and a brain to register it. There's no denying that in ordinary usage, these two meanings of sound are often confused, such as when we speak of the "speed of sound," as if the noise we heard had actually traveled from its source, riding the waves. Yet it is also symptomatic of the poverty of much philosophical debate around these matters, that it offers no other option. Sound can only be either "in the world" or "in the mind," either physical or psychic. But what if it were neither one nor the other? What if—in order to get to the root of our *experience* of sound—we have to set these binaries aside?

To achieve this, we have first to drop the peculiar logical detachment of the thought experiment, so beloved of philosophers, and plunge into the experiential maelstrom of the world itself. Suppose, then, that you are walking in the forest, in a howling gale. It is dusk, and the light, already dimmed by heavy cloud, is fading fast. As it darkens, the ambience seems to thicken, as the lightness and transparency of sunlit air gives way to something closer to a viscous fluid. The trees, whose shapes, textures, and colors had shown up so clearly in broad daylight, are now but a shadowy presence. You have to peer through the gloaming to make them out. From all around you, however, you hear the creak of branches as they rub against one another, and as the wind tears through their leaves. You feel like a mariner at sea, listening out for the creaking timbers of his vessel as it is tossed by the swell. As the mariner finds himself cast in a realm of ocean and sky, for you likewise, earth and atmosphere together comprise a world in flux. It is a world in which things are not already laid out, like objects and properties on a stage, but from which they are forever emergent, as folds or crumples of the flux itself. Such is the ocean wave that the mariner hears in his creaking timbers. And such is the gust of wind for you, heard in the creak of tree-limbs.

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Then, all of a sudden, a massive gust comes roaring out of nowhere. A splintering crack, at first hesitant, intensifies into a crash, like that of a breaking wave, shortly followed by a thud so heavy that it takes you in the pit of the stomach. The very earth seems to shake. In that moment of the tree's falling, you are as swept up in the mêlée as is the mariner whose ship is about to capsize, your entire existence borne along in the turbulence of a milieu that is simultaneously cosmic and affective. This milieu is what we call an *atmosphere*.[1] Sound, then, is neither physical not psychic but atmospheric. It is an implosion of the milieu that rends the flesh of your own being as much as of the world. It is not as though, when it falls, the tree *makes* a sound which is subsequently broken off from its source and dispatched like a package for you, the recipient, to unpack its significance. Rather, the sound *is* the atmospheric event of the tree's falling. The circumstance of your *being there*, in that particular place and at that moment, inevitably makes you a perhaps unwilling accomplice in the tree's final spasm. The sound itself is an index of your complicity. Perhaps, recalling the event afterward, you might explain that you heard a loud sound, and guessed that it must be of a falling tree. But that's not how it was at the time.

Let me adduce another example. Suppose it is not the tree's falling that you hear, but a rumble of thunder. Compared to the suddenness of the crash when the tree hits the ground, the rumble is a more drawn-out affair, alternately growing and fading in intensity. And whereas the crash appears to erupt from an epicenter somewhere in the woods, the rumble echoes around the entire sky. The proximate cause of the sound lies in the explosive blast of air superheated by a lightning bolt. We are all familiar with the fact that in our perception, the flash of lightning precedes the rumble of thunder by a measurable interval that allows us to estimate how distant the storm is from where we stand. This is because compression waves are transmitted through air roughly a million times slower than electromagnetic rays. Where the latter reach us almost instantaneously, the former take their time, approximately five seconds for every mile. The rumble that fills your ears, however, like the flash that dazzles your eyes, is of an entirely different order. It is fair to say that there would be no rumble without ears, and no flash without eyes. Yet it would be wrong to conclude that thunder and lightning exist only in the mind, as *objects* of perception. Indeed, they are not objects at all, but rather the reverberations of a consciousness that, far from having closed off from a world "out there," has opened up to the boundless expanse of sky (see Ingold, 2022, p. 89).

This means having to think differently about ears. Anatomically, of course, the ears are organs of exquisite design, delicately primed to respond to vibratory stimuli, and firmly cemented on each side of the head. And the head is a hard, bony cavity, inside which lies the soft material of the brain. The ears, then, function as transducers, picking up vibrations impinging from outside and converting them into neural impulses for interior processing. In our experience of hearing, however, there is no inside and outside. Where, anatomically, our head should be, there lies the world. What then becomes of the ears? Have they, along with the head, dissolved into the ether? Or have they rather merged with our listening? If, as I have suggested, sound is not so much an object we hear as the underside of our own experience of hearing, and if this is what it means to be possessed of ears, then a walk in the woods on a stormy eve would find ourselves literally in a forest of ears, all around and above. Every creaking branch, every falling tree, every fold of the thunderous sky, would be listening to you, even in the passion of your listening to them. No one, of course, would be so foolish as to think that ears actually grow on the branches of trees, or that they float like flying saucers in the sky. This is not the point. It is a question not of anatomy, but of affect.

To get to the bottom of it, we could imagine ourselves set down—as, in real life, was the ethnographer Bronislaw Malinowski—on the island of Kiriwina, one of the islands of the Trobriand Archipelago off the eastern tip of Papua New Guinea, where we are witness to the performance of garden magic. The magician, squatting alone in the corner of the garden planted with the staple crop of yams, addresses both the soil and the yams whose abundance he aims to secure. As he launches his words, rumbles of thunder and gusty winds, common in this season, portend that the world is listening and that the words have been received. In due time, the yams will swell below ground, while above it the luxuriant growth of vines and drooping foliage attest to a plentiful crop. The islanders are convinced of the beneficial effect of their magic, but to their ethnographer it remains an enigma. They surely cannot seriously believe that the mere utterance of esoteric words causes plants to grow! Plants, as Malinowski acknowledged, have no ears, but people do. Could it be, he wondered, that the magic works its effect precisely because words intended for plant-beings that have no ears actually fall on the ears of beings, namely human, for whom they are not intended? (see Malinowski, 1935, p. 241). But if that's the reason, then why would the magician sit all alone in the garden, with no one else within earshot?

The real answer, I would suggest, is that by lending his voice to the chorus of earth and atmosphere, the magician brings about a kind of affective resonance, a commingling of energies wherein lies the potential of the cosmos to generate new life. But as he listens for a response from the thunder and the winds, he lends his ears as well. For it is by way of the ears that meteorological phenomena such as these can assume an audible presence. And likewise, to return to the tree falling in the storm, by lending your ears to the tree, you create the conditions for its cry to be heard. You give the tree a voice that it would not otherwise have. Thanks to your presence, the tree can listen both to itself and to everything around, *through you*. If the idea of lending an ear to the tree appears surreal,[2] it is no more so than asking others to lend theirs, as did Mark Antony when, in Shakespeare's *Julius Caesar*, he exhorted his fellow Romans to "lend me your ears." He did not ask them to part with their organs of hearing! He rather asked them to give him a voice and let it be heard, to align their attention with what he has to say, to draw them in. The ear, in this sense, is the attentiveness of a body placed on aural alert—not so much a "body with ears" as an "ear-body" (see Manco, 2010).

How, then, do you turn a body with ears into an ear-body? You have first to decompose it anatomically so that it can then be reconstituted as something like a tissue of affects. This is not a surgical operation, of course, but a switch of perspective from acoustics to phenomenology, or from objectification to experience. The ears, thenceforth, are no longer the organs of a body but the affective dispositions of a body without organs (see Deleuze & Guattari, 2004, pp. 165–184). In this perspective, the body is not a self-contained entity, enclosed by an external skin and set over and against a surrounding world, but a kind of probe, an antenna, that feels its way into the folds and along the creases of the crumpled atmosphere, threading through the milieu much as a plant root or fungal hypha threads its way through the earth. Recall that the ear-body finds itself in a viscous medium in which things are not already given, in objective forms, but have to be made out. Making out is an act of differentiation, of discerning shapes and contours from within the flux in which all are primordially immersed. Thus, to hear a sound is not to identify an object or an episode of this or that kind—this, a falling tree; that, a rumble of thunder—but to enter into the grain of the event, cleaving if from within, and to follow where it leads.[3] It is, in effect, to trace a line.

This is a line of sound. But it is not a line of transmission. These respective lines, of sound and transmission, have quite different properties, and it is crucial to recognize the

distinction between them (Ingold, 2015, pp. 106–111). A line of transmission connects an energetic source with a sensor: it could be a human ear; but it could just as well be some kind of recording device. This is what we have in mind when we say, as we commonly do, that sound "travels" from A to B, or that it "reaches our ears," from some place far off. We imagine the line to be straight, though it may in fact be bent on account of variations in atmospheric density, deceiving us into supposing the source to be much closer, or further away, than it actually is. In any case, the time it takes is a multiple of the distance traveled. Compression waves travel through air, under normal pressure and in a temperature of around 20°, at approximately 343 meters per second. The line of sound, by contrast, does not connect points but lasts or carries on, in real time, along a path that twists and turns with continuous variations of pitch, timbre, and amplitude. How fast, then, does it travel? That all depends on the conduct of its source. Suppose I hear your approaching footsteps. As my own hearing joins with the rhythmic pulse of your gait, the sound itself appears to travel at walking pace.

In short, *sound walks, just as you do*. For most human beings, throughout the interval of life between infancy and infirmity, walking on two feet is the way of getting around that comes most naturally to them. Yet again, the anatomy of walking is not the same as its phenomenology. The mechanics of bipedality sees the body, equipped with its several organs of sense and motion, displaced from point to point across a plane surface. In our experience, however, walking is an instance of a kind of movement I would call *wayfaring*, characterized by the fact that it does not connect points or stick to a predetermined course but continually improvises a passage in-between, in ongoing response to a perceptual monitoring of the entire milieu as it unfolds (Ingold, 2007, pp. 75–84). In walking, the wayfarer's body becomes the line of its own movement. Like the root or hypha, it grows from the tip and leaves a thread in its wake. Not every walk fares quite like this, of course; there are exceptions such as the forced march. And not all wayfaring is done on foot. It may be on horseback, by bicycle, end even—on occasion—by car. What is peculiar about walking as wayfaring, however, is the characteristic rhythmic alternation by which with every step, we lift one foot and fall forward, only to restore balance as it grips the ground ahead, allowing the other foot to be lifted, and so on. It is an alternation of risk and recovery.

Walking along, you hear the rhythmic pulse of your own steps, moderated by the textures of the ground underfoot—whether hard or soft, gravelly or squelchy—mingled with the sounds of the wind in the trees, the creaking branches, distant thunder, and all the other phenomena to which you lend your ears, bringing them thus into audible presence. How should this earthly and atmospheric chorus be described? Many would call it a soundscape. I am not convinced, however, that the term is entirely apt. For the chorus is not already laid out, waiting to be surveyed. Nor can it ever be played back, as a totality. It is ever-unfolding, in the contrapuntal interweaving of multiple strands that can only be unraveled and individuated from the inside. The shapes of sound, as I have observed, can only be *made out*. And in making them out, we make out ourselves as well (see Ingold, 2022, pp. 106–107). Like figures in the mist, both we and they have no substance apart from that of the milieu, in the folds and creases of which all existence hovers. To listen is continually to be reminded that we are not just possessors of the world in which we move around and find our being, but *possessed by* it. It is not, then, that hearing provides a portal for the human mind to take possession of a world. It is rather that in taking possession of its human inhabitants, the world makes itself heard.

Notes

1 As I have argued elsewhere, "atmosphere is neither cosmic nor affective but the fusion of the two" (Ingold, 2015, p. 79).
2 For a visual artistic representation of an ear tree, see Joan Miró's "The Tilled Field" (La terre labourée), painted in 1923–1924.
3 I take this idea of "mobilizing the cleave of the event, its internal schism" from the philosopher Erin Manning (2016, p. 6).

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27
DEFAMILIARIZING THE SENSORY

Tim Edensor

In this chapter, I explore how experiences of moments when the world suddenly becomes utterly unfamiliar might provoke us into interrogating how our normative sensory experiences are invariably culturally shaped. Sensory defamiliarization can decenter notions that the senses provide unmediated access to reality and reveal their cultural, historical, and very human partiality. I first consider those moments when we are immersed in settings that are sensorially unfamiliar, when unfamiliar sounds, sights, and smells assail us. Second, I explore the different ways in which deliberate attempts to enter an unfamiliar sensory world are undertaken in leisure pursuits. The remainder of the chapter focuses on how creative practitioners working with light, color, and darkness invert habitual sensory experience. I conclude by drawing on the ideas of Jacques Rancière to argue that sensory defamiliarization offers potential for a progressive politics.

In order to contextualize sensory defamiliarization, it is necessary to acknowledge that most of our sensory apprehension of the world takes place in familiar spaces in which typically we unreflexively and habitually experience sensations. Most of the time, familiar sites, routes, and fixtures surround us and we reproduce this homely space in repetitive, habitual actions and routine engagements, for example, in daily household tasks and recreations, regular commutes, drives to the shop, visits to local cafés and pubs, or walks in the local park. David Seamon (1979) terms these routine journeys "place ballets," and contends that they foster a mundane, unreflexive being in the world. These modes of inhabiting place are further sustained by the ways in which they are shared by others, strengthening affective and cognitive links and locating people in somewhat stable networks of relationships, objects, and spaces. These shared habitual routines in familiar spaces underpin common sense notions that this is *how things are* and this is how *we do things*.

Crucially, these everyday spaces are also profoundly sensual and affective settings about which awareness may be dim, and yet the forms of embodied knowledge that emerge through them are constituted by an understanding deepened by time and embedded in memory (Lippard, 1997). The accumulation of repetitively sensed mundane textures, smells, sounds, and sights become sedimented and develop a sense of belonging to place. Consider the subtleties of climate, floral smells, colors of clothing, sounds of birdsong, tastes of local food, and textures of the streets to which we may have become habituated.

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Yet when we journey elsewhere, these sensory elements may be absent, and are replaced by very divergent sights, smells, sounds, textures, and climatic conditions that might seem acutely peculiar.

Sensing unfamiliar place

I was not well-traveled when I arrived at the small Gujarati village where I was to spend six weeks. Never having been to India before, after a blurry, jetlagged day in Delhi, I took a cramped bus journey. Tourists often refer to an overwhelming sensory overload when they travel across India, but for me, the village constituted a different order of sensory defamiliarization in which a host of social practices and gestures combined with a plethora of strange sights, smells, sounds, and tactilities. Nothing seemed recognizable or familiar, generating a disorientation that was both enthralling and bewildering beyond any previous or subsequent experience. The green rice fields were dazzling, and the sumptuous foliage of the mango trees and colorful saris worn by the village women deviated from the muted tones of the British city in which I lived. Each evening, slowly flapping flocks of large fruit bats flew overhead. Then the monsoon arrived, and what had been a dry hollow on the edge of the village was rapidly transformed into a glistening pond. But it was the noises that suddenly emerged that drew me toward the site: a chorus of croaking frogs that emerged from the cool mud below the ground's surface in which they had retreated, each of them a startlingly brilliant yellow. The humidity and heat generated a thick earthy smell that pervaded the village, supplementing the scent of the bidis smoked by the men and the dung deposited by herds of ponderous, sleek buffaloes, along with the dust that they kicked up that clogged eyes and throat. The sharp cries of peacocks from the nearby orchards and snatches of Bollywood music from homes and passing cars supplemented this sensory alterity. While this immersion in an unfamiliar sensory environment dramatically introduced me to the sensations of rural Gujarat, it also alerted me to the very specific sensory realm to which I was accustomed, revealing how my sensorium had adapted to its specific sensory affordances.

A similarly revelatory impression was generated by the lucid intensity of Melbourne's summer sunlight, the vivid colors and deep shadows it produced, effects that profoundly contrasted with the cloudiness, weak sunlight and the subtle, ever-changing patterns of light and shade that typifies the light that falls across many British landscapes (Edensor, 2020).

It is not only sudden immersion in an unfamiliar environment that may render the world sensorially strange. The advent of a natural disaster such as an earthquake or tsunami can render familiar surroundings unrecognizable, with the displacement of elements of the landscape and the emergence of disturbing smells, sounds, and sights. Most recently, the global COVID-19 pandemic utterly inverted the sensorial inhabitation of homes and everyday settings. In many cities, the ever-present, rhythmic thrum of traffic and airplanes abruptly ceased, bestowing a strange quietude that simultaneously fostered an awareness of the nonhuman rhythms, especially those signified by birdsong that are usually smothered by the ambient urban din. Similarly, the inability to travel far beyond the home and the importance of carrying out exercise spurred many people to become newly aware of sensory aspects of their local environments they had previously overlooked as they ventured down unexplored byways, coming across the smells of home cooking, the sounds of breezes in the trees, and a host of other minor sensations.

Regulating the senses

The typically divergent, surprising experiences provoked by sensory alterity testify to the ways in which the normative worlds we usually inhabit are managed, devised, and reproduced to generate a reliable, predictable environment without disturbing inhabitants. This exemplifies how the senses are themselves managed according to prevailing values and political imperatives to control experience and direct movement, intrinsic to what Jacques Rancière (2009) terms the distribution of the sensible and how it is shaped by those who have the authority to impose designs on space, articulate their suitability, and normalize their use. Here, Rancière considers that aesthetics is integral to a politics that mobilizes normative, sanctioned ways of managing, talking about, and designing space, practices that are invariably entwined with economic, political, bureaucratic, and regulatory power. Rancière claims that such a politics "revolves around what is seen and what can be said about it, around who has the ability to see and the talent to speak, around the properties of spaces and the possibilities of time" (2009, p. 13). The outcome of these dominant ideas and procedures, this aesthetic consensus, is the production of a normative material reality, an experiential, existential force that is difficult to critically interrogate. This sensory framing generates prevalent forms of common sensing that inform how we experience and assess the materialities, colors, smells, sounds, and tastes of place.

A plethora of technological developments and bureaucratic imperatives have increasingly regulated sensescapes, perhaps creating unstimulating "blandscapes," or what David Sibley (1988) describes as "purified" spaces. Richard Sennett (1994, p. 15), for instance, argues that many urban spaces have been reduced to "a mere function of motion," engendering a "tactile sterility" where the city environment "pacifies the body," with car drivers, for instance, using only "micro-movements" to facilitate smooth transit. Similarly, Trevor Boddy (1992) draws attention to a "new urban prosthetics" that has coerced pedestrian bodies into a passive engagement with surroundings via a system of smooth and sealed walkways, escalators, bridges, people-conveyors, and tunnels. Such regulatory systems have produced an aesthetic and material form typified by the mild stimulations of "vaguely reassuring icons" and "trickling fountains" and the filtering out of glaring sights, disruptive textures, and "troubling smells and winds" (Boddy, 1992, pp. 123–124). Mark Gottdiener (1997, p. 73) identifies the "themed milieus" of shopping malls, theme parks, festival marketplaces, and regenerated waterfronts that constitute highly managed and created "sceneographies." These sensorially managed realms have also been supplemented by organized state programs that seek to train the senses. For example, Jonas Frykman (1994, p. 65) discusses how in Sweden, a suite of "good habits" were promoted by state institutions through the development and education of scientific regimes of diet and exercise among citizens.

Besides encouraging physical fitness and health, such programs aimed to cultivate a reflexive body that could become "the training ground for the double process of educating the senses and making good use of them" (Frykman, 1994, p. 65). Such schemes, as well as broader hierarchical understandings that specify which senses are most important, which sensations lead to overexcitement or confusion, and which foster an orderly and discerning approach to experiencing the world, undergird Constance Classen's (1993, p. 9) important insistence that "we not only think *about* our senses, we think *through* them." Critically, our senses do not provide unmediated access to reality but are shaped according to cultural norms that value and devalue particular sensations. Such conventions contribute to the production of space. They inform standards about the height of buildings, regulate how

ornamentation might be deemed appropriate or inappropriate, regulate the use of materials and color, and inform which smells and sounds are prohibited. They thus instantiate modes of common sensing that when confounded, may lead to the kinds of sensory disorientation I discuss earlier.

Transcending normative sensory experience: leisure practices and 1960s psychedelia

Though these sensorial conventions pervade many of the mundane spaces we inhabit, there is wide scope for their conditional transcendence by the provision of numerous opportunities, many provided by the tourism and leisure industries, others emerging from subaltern cultures and subcultural practices. Commodified leisure experiences typically offer a conditional, managed encounter with sensory alterity. A range of action sports, including skateboarding, white-water rafting (Cloke & Perkins, 1998), parkour (Saville, 2008) and scuba diving, (Merchant, 2011) promote visceral excitation. Ian Borden (1998, p. 216) suggests that skateboarding is "nothing less than a sensual, sensory, physical emotion and desire for one's own body in motion and engagement with the architectural and social other." The sensory thrills of the fairground include the whirling around of bodies on roundabouts and waltzers and the high-speed plummeting and rising of roller coasters, attractions that are developed and extended in the ever faster and higher white-knuckle rides of amusement parks (Sally, 2006). Less regulated leisure and tourist realms are sought by urban explorers, trekkers, ravers, and drug takers, while backpackers—like me in the visit to the Indian village recounted earlier—also seek spaces that challenge normative sensory experience, realms in which multidirectional movements, cluttered environments, unfamiliar smells and tastes, and striking sounds excite the sensorium (Edensor, 2006). I contend that while certain less controlled practices offer radical sensory encounters, most of the more regulated modes of sensory escape follow conventions and fulfill the anticipations of participants about the particular sensations that they will experience. In this context, I now focus on how certain radical approaches and counter-cultural practices that emerged in the 1950s and 1960s sought to defamiliarize space by undercutting normative meanings, but also by offering different sensory apprehensions of place and landscape.

The Situationist practices of the derive and détournement encourage participants to discard their usual habits and allow themselves to be emotionally and sensorially drawn (or repulsed) by the affordances and peculiarities of the space through which they move. In repudiating the construction of the functional and spectacular qualities of many built environments, they privilege playful, spontaneous, and sensory engagements. A rather different approach to defamiliarization was adopted by Georges Perec who explored what he termed the "infra-ordinary," those numerous elements of the everyday that are generally apprehended unreflexively and habitually. Perec developed a range of interrogatory procedures to bring these overlooked elements to light, scrutinizing them as if they were unusual objects worthy of examination. Besides investigating their disregarded functions and meanings, Perec also sought to look, feel, and hear them as if for the first time, as is exemplified in his focus on the mundane soundscapes of quotidian life (Pettinger, 2019).

These disparate ideas about how the senses might be scrambled or supplemented by unfamiliar sensory experiences, and thereby rendered open to critical analysis, were mobilized in the experimental climate of 1960s psychedelia. Practices of sensory defamiliarization were generated through the creation of intense engagements with music, drugs, color, and light.

Such experiences were calculated to reconfigure sensations and thereby generate a more critical approach to the values, designs, and ideals that permeated mainstream experience.

Latham and McCormack (2004) detail how psychoactive substances can intensify the sensory and affective experience of cities. For example, in the specific culture of 1990s raves, the drug ecstasy was used to reconfigure sociality and deepen the sensations of music, dancing, and relating to other bodies as participants were "hurled into a vortex of heightened sensation, abstract emotions and artificial energies" (Reynolds, 1998, p. xix). But earlier, in the 1960s, much attention focused upon the effect of hallucinatory drugs such as LSD, championed by enthusiasts as able to liberate users from habits of thought, feeling, and perception. However, other psychedelic experiments were not organized around mind-bending substances. With an emphasis on rich sensation and exploration, diverse architectural designs were devised to extend the potential for sensorially experiencing the world otherwise, and these were supplemented by a commitment to organize immersive experiences "designed to be consumed in an embodied, encounter-based mode" (Rycroft, 2013, p. 58). Such strategies to disrupt sensory experience mobilized "an alternative architectural politics around instances of dissensus" (Kullman, 2019, p. 295) through a variety of shelters, scaffolds, domes, and bubbles. In addition, new sensory technologies of cybernetics, op-art, new forms of illumination and sonics, robotics, computers, projection, automation, new materials, and holography were frequently deployed in devising interactive and participatory settings (Blauvelt, 2016) that playfully and creatively stimulated the senses. Many of the creators of these spaces sought to reorient bodies toward the cultivation of a more critical disposition toward built environments.

Such aims explicitly informed the design of the Fifth Dimension, a psychedelic fun palace installed in the small Ayrshire seaside town of Girvan in 1969 (Dickens & Edensor, 2021). The attraction's designer, Keith Albarn, sought to induce multisensory experiences as a foundation for opening-up individuals to critical and reflexive thinking by means of providing a plethora of visual, olfactory, sonic, or haptic stimulations arrayed across the Fifth Dimension's 17 domed chambers. Illuminated, sound-responsive shapes, and colors shifted according to the movements of visitors while buzzes, bells, tinkles, and low electric murmurs altered in intensity and pitch. Tactile stimulations varied across floors from spongy, lumpy, bouncy, and hard and through zones that included buttons to press, levers to pull and pedals to press. The whirl of sensory experiences left many visitors bedazzled and disoriented but also thrilled.

In developing the discussion about how spaces such as the Fifth Dimension were tuned to provide a radically unfamiliar sensory experience, I now consider how the senses can be defamiliarized through contemporary creative practices that focus on a more specific manipulation of the media through which we experience the world—through light, color, and darkness.

Light

Typically, our experience of the urban night has become familiar through serial encounters with standardized street lighting, illuminations devised to control vehicular traffic, advertisements that glare from walls and sidewalks, brightly lit window displays and shop signs. These ordinary nightscapes foster the acquisition of habitual, predisposed maneuvers and apprehensions as we travel along paths in which "visual possibilities are shaped in advance" (Blumenberg, 1993, p. 62), chosen by those who have determined the siting, spacing, intensity, and color of illumination. Yet this accustomed familiarity with rather bland urban nightscapes

can cause us to forget that since early modern times, electric light has added to what Collins and Jervis (2008, p. 1) term the phantasmagorical city, replete with "the shadowy hauntings of the fleeting and insubstantial," producing the defamiliarization, uncertainty, and fascination that have long been constitutive aspects of modern sensory experience. In contemporary times, these disruptive, enchanting qualities are notably expressed in the plethora of creative lighting that has been developed through the expansion of popular light festivals of varying scale and location, illumination that can confound and challenge normative sensory experiences of the city at night.

Most dramatically disorienting are the sophisticated light projections that play across the facades of usually familiar buildings. Digital mapping techniques allow software to exactly "map out points of interface with the spatial coordinates of the existing structure" using specific architectural features such as windows, niches, cornices, columns, and arches (Susik, 2012, p. 115). Such works possess the capacity to make the familiar seem suddenly strange, to defamiliarize sites that seem stable in function, meaning, and character. At Melbourne's annual Gertrude Street Projection Festival, all kinds of fantastic scenes are projected onto the walls of local pubs, shops, and homes. Projected works include mini-dramas, dance pieces, abstract animations, extraordinary looking people and creatures, visions of other places, geometric patterns, and ghostly architectural features and archival films. Weird monsters prowl across a portal in a shop window, a woman floats in azure water, one facade is camouflaged by vibrantly colored and dynamically mutating geometric forms, while another features the street art of Berlin, New York, and Amsterdam (Edensor & Sumartojo, 2018). A medley of other worlds and sensations are arrayed across a familiar built environment, rendering it suddenly bizarre. In other projections, buildings are subject to illusory optical techniques that seem to undermine the solidity of their materiality and structure. Architecture may appear to crack, fragment, and crumble in front of our eyes, suddenly transform into a fluid, melting entity, rise above the ground, or be consumed by fire and ice.

Far from encouraging passive spectatorship, projection art can serve to provide counter spectacle that opens up opportunities for conversation. As Stephen Vilaseca (2014, p. 217) contends, such techniques can transform understandings of architecture into "poetic space" that "breaks with the imposed order of the original design to become something completely different." As such, festive light projections can recapture the oneiric dimensions of earlier modern nocturnal space in which the sudden advent of electric illumination sensorially and perceptually transformed the city, reshaping it as a space that was "exhilarating and disorienting to its inhabitants" (McQuire, 2008, p. 122). Light projection art can thus contribute to what Jennifer Fisher and Jim Drobnick (2012. p. 36) term "the *nocturnal carnivalesque*," a condition that "defamiliarises the city as well as opens it up to alternative interpretations and possibilities."

Color

As with illumination, the distribution of color in urban places eventuates from multiple decisions in which most people have little say. Colors are chosen by designers and architects, manufactured by corporations specializing in paint and building materials, and standardized by professional bodies and local authorities. These agents collectively instantiate procedures, codes, and habits that bestow regular color schemes on places and foster perceptions and sensory apprehensions, purveying common understandings that this is the way in which color should be sensibly distributed.

In a Western context, David Batchelor (2014, pp. 22–23) argues that the marginalization of color, informed by a widespread chromophobia, has been informed by two central notions. First, color is construed as "other," 'usually the feminine, the oriental, the primitive, the infantile, the vulgar, the queer or the pathological," and second, color is regarded as superficial, deployed as a cosmetic adornment that disguised reality. Yet as Timon Beyes (2017, p. 1468) asserts, such meanings may evaporate in the face of how "color's contingent, formless form and aesthetic force (are) irreducible to explanatory frameworks based on physical matter . . . or linguistic codes."

In particular, two art works that powerfully deploy illuminated colors are highly effective at revealing these non-representational qualities and scrambling our usual sense making practices. First, Venezuelan artist Carlos Cruz-Diez created *Chromosaturation* by using fluorescent tube lights with blue, red, and green filters, each radiating within three interconnected rooms. Strikingly, at least for human perception, the rooms were entirely bathed in these singular colors, appearing entirely monochrome, bathed in purely blue, red, or green light. These chambers contained no fixtures, bestowing an almost solid materiality on the colors. The human sensorium is entirely unused to encountering colors in this singular fashion; instead, our visual apparatus is geared to experiencing the multiple colors that we encounter in almost all settings. As a consequence, immersion in a space in which only one color prevails is uncomfortable. Yet the brain compensates for this overload by transforming the environments that we behold, in this case, by reducing the intensities of the colors into pink, light green, and pale blue. There is no conscious process through which we can return to experience the originally intense colors we experienced other than to walk out of the room and then after some time, reenter it. Because the sensory process is involuntary, it is difficult to accept that the quality of the light in the room has not changed and that it our perceptual and sensory systems that are transforming the tones. Accordingly, *Chromosaturation* undermines faith in the accuracy of the ways in which we sense the world (Edensor, 2017). Our perception is revealed to be partial and specifically human, and is unable to provide unmediated access to any reality.

A different but equally disorienting use of color is deployed in an installation created by James Turrell at Hobart's Museum of Old and New Art. For *Unseen Seen*, two people access a raised, egg-shaped chamber by stairs, lie side by side on a mattress and gaze upward at the curve of the white ceiling. Visitors choose between a "hard" cycle and a "soft" cycle and are provided with a panic button lest the experience proves too unsettling. Slowly at first, but then rapidly building to an intense visual bombardment, a sequence of extremely varied colors floods the eyes for around 12 minutes. These colors entirely dominate visual experience and possess no representational elements or point of focus. For some they are overwhelming, for others they solicit a meditative experience. For most they trigger a series of hallucinations in which successive kaleidoscopic patterns or figures ceaselessly emerge and disappear, as the brain seeks to make sense out of the intense singular colors experienced. The optic onslaught is followed by immersion in complete darkness in a nearby room, as after images play across the gloom and the eyes recover.

Less immersive but equally salient in prompting us to apprehend the world differently through color are those occasions on which we encounter buildings, art installations, and ornamentations that initially may seem to intrude on the somewhat monochromatic urban settings many of us inhabit. Here, I focus on how unorthodox color can be deployed in prestigious architectural design, that of Central St. Giles in London's west end, designed by celebrated "starchitect" Renzo Piano, completed in 2010, and recently bought by giant

technology corporation Google as their UK headquarters in a billion-dollar deal. Here, two interconnected mixed-use buildings are clad in arresting orange, red, yellow, lime green, and light gray glazed terracotta tiles, affording a sharp divergence from the gray concrete, creamy stone, and uniform brown bricks of the surrounding architecture, a contrast the architect explicitly sought to create. Piano contends that cities "should not be boring or repetitive. One of the reasons cities are so beautiful and a great idea, is that they are full of surprises; the idea of color represents a joyful surprise" (World Architecture News, 2011, n.p.). Tellingly, chromophobic impulses resonate in critiques about the luridity of the buildings and the disruption to a "traditional" urban landscape. Others, however, commended its warmth, with Ike Ijeh (2010 n.p.) suggesting that these striking colors have "cheered up an obscure corner of London with a riot of reds, yellows, greens and oranges—making the rest of the capital look a tad grey," notably contrasting with "the tepid monochrome monoliths of so much of London's contemporary commercial architecture."

The two art installations I have discussed and the dramatic colors of Central St. Giles makes it "possible to think ourselves in relation to color(s) differently, to live color(s) differently, and, therefore, to live differently" (Slack & Hristova, 2017, p. 451) and to admit "new possibilities for living relationships of difference in-color" (p. 463). Such colorful disruptions can intervene to provoke dissensus, inverting regimes of the sensible through which chromophobia persists and tenacious norms that dictate what colors should be deployed and where (Edensor, 2023).

Darkness

Finally, I now discuss what might be regarded as the opposite sensory condition to light and color, darkness, and how it offers a wealth of possibilities for sensing the world otherwise. First, it is critical to recognize how darkness diminishes visual senses and foregrounds more acutely those senses that are often occluded by the dominance of sight during the hours of daylight. Yet because darkness has been devalued through a combination of superstition, religion, and the values espoused by Enlightenment thinking, for many it remains deeply unfamiliar, displaced by extensive (over-)illumination. Michel Serres (2008, p. 68) captures its sensory potency in claiming that night "does not anaesthetize the skin but makes it more subtly aware. The body trains itself to seek the road in the middle of darkness, loves small insignificant perceptions: faint calls, imperceptible nuances, rare effluvia, and prefers them to everything loud."

John Tallmadge (2008, p. 140) contends that vision declines in importance and that sensory information is gathered by hearing, touch, and smell, and that the body "relaxes, opens, breathes, extends its attention outward into the world the way a plant feels its way into the soil with roots or into the air with leaves." Yet vision is not entirely subsumed by these other senses but takes on specificities that deviate from those mobilized by day, when according to John Daniel (2008, p. 23), vision "catches on the surface of things, gets snagged and tugged about by their multiplicity." Nocturnally attuned vision is especially captured by Peter Davidson's (2015) nuanced account of the subtle, shifting experience of gloom during the stages of twilight, in which he draws on a wealth of historical, literary, and artistic representations to identify a riot of nuanced affects and sensations. Such transformed sensations are also related by Jane Brox (2010, p. 243) in her description of a New York blackout during which "skyscrapers take on a geological sheen and the stars resemble those of ancient times." Robert Nye (2010, p. 83) describes the non-visual sensations encouraged by the experience

of a blackout in which "a state of suspended animation sharpens . . . perceptions of (the) immediate environment . . . the city is quieter and sounds unfamiliar."

In rural settings, especially those places designated as dark sky parks, the sensorium is especially defamiliarized for urbanites unused to dark landscapes. Here, the silvery glint of a rock, the glimmer of water, or the thick shadows cast by trees reconfigure ways of looking and sensing. Sound becomes accentuated, with greater attention paid to the scuttles of non-humans and the changing sounds of rushing water and wind, while smell also assumes greater prominence as the scent of carrion or fungi pervades the air. Moreover, with little visual evidence of what lies ahead, a heightened tactile awareness of space underfoot emerges as the walking body learns to differentiate between textures and anticipate the challenges of forward movement (Edensor, 2013). Though it is now deeply unfamiliar to contemporary experience, the heightened non-visual sensory apprehension of dark space was habitual and skillfully deployed in an era before widespread public illumination as Roger Ekirch (2005) details. He explains how parents devised games to accustom their children to darkness, taking them out on night walks and testing their ability to locate place by touch, sound, and smell, instilling a non-visual familiarity with local landmarks and hazards.

In contemporary times, darkness has been deployed to transform experience within the leisure and culture industries, used to defamiliarize the usual apprehension of art installations, plays and cities themselves, as well as of music and dining.

Exemplifying the former, *Eclipse*, staged in 2011, was a series of concerts performed by blind Malian couple Amadou and Mariam that were performed in complete darkness (Edensor, 2017). Audience members could attend to the nuances of the lush music that washed over the pitch-black venue, overwhelming other sensory experiences. Yet the visual absence of the audience rituals and shared participation that typically characterizes the experience of live music performance were disconcerting. There were no visible performers, dancing fans, or light show, and in the absence of these familiar cues, audiences largely remained subdued. Yet in a rousing finale, the lights gradually rose to reveal a resplendent Amadou and Mariam and their band on stage. The audience was catalyzed by the abrupt sensory transformation and their sudden reattunement to the sights and movement of a rock concert.

Rather differently, *Dans le Noir?*, a London restaurant, prepares diners for a visit: "by suppressing the dominant sense of sight, you will enter a world in which one is uncertain of surroundings and experiences" (Dans le Noir, n.d., n.p.). Research (Edensor & Falconer, 2015) revealed that many diners referred to an enhanced awareness of the flavors, consistencies, chewiness, smoothness, or graininess of the food they ate, despite most failing to recognize what they were eating. Also accentuated was a greater appreciation of tactile and verbal communication with fellow diners and the waiting staff.

While expansive illumination has rendered darkness strange and fearful, it has the potential to reconfigure the visual apprehension of space and to foreground the experience of olfactory, tactile, auditory, and vestibular stimuli. Such experiences have become scarce, but they facilitate meditative, imaginative, social, and spiritual possibilities that can supplement the sensations solicited in the daylit world (Dunn and Edensor, 2023).

Sensory ethnography as sensory defamiliarization

The routine practices of inhabitants characteristically undergird normative understandings about the meaning of familiar places, and the habitual sensing of these everyday worlds becomes unreflexively ingrained in bodies. Yet such realms are always liable to become

strange, whether deliberately or through sudden transformation, redevelopment or non-human energies. Turnbull et al. (2022, p. 1212) aptly note that disorientation is "tentative, cautious, unstable, yet imbued with potential." I have argued in this chapter that sensory defamiliarization offers opportunities for temporarily practicing, representing, and apprehending place otherwise. Through defamiliarization, Bell et al. (2005) maintain, habitual perceptions and unquestioned assumptions can be revealed as geographically and historically specific, affirming that the senses are irreducibly culturally and socially shaped, and can never provide unmediated access to the reality of the world. Through defamiliarization, they argue, we may consider the familiar world from a suddenly distant, critical perspective, undermining tenacious commonsense understandings.

The defamiliarization of the senses can promote a self-reflection through which a humbler acceptance of our sensory limitations can emerge, as well as a renewed awareness of the ineffable experiences of myriad non-humans. For Jacques Rancière, the distribution of the sensible forges a material realm that demarcates what is seen and unseen, smelled, heard, and touched, and to which we become attuned during everyday habituation. Through the manipulation of light, color, and darkness by the kinds of skilled creative practitioners discussed earlier, the sensorial defamiliarizing of familiar environments can act to destabilize the "self-evident facts of perception based on the set of horizons and modalities of what is visible and audible as well as what can be said, thought, made, or done" (Rancière, 2004, p. 85). In developing a sensory ethnography that can "provoke, intervene, and disrupt the established regime of the sensible" (Berberich et al., 2013, p. 318), we may reimagine our surroundings, their histories, and qualities.

This is important in two ways. First, a provocative and disruptive sensory ethnography can solicit an openness to looking, smelling, listening, feeling, and tasting otherwise, encouraging us to investigate the familiar, the "infra-ordinary," as Perec called it, as if encountered or the first time. This can both deepen the experience of place and foster an understanding that the familiar world is far from mundane because it can be sensorially experienced in multiple ways. This kind of ethnographic work can attune us to listening for sounds that are usually unheard or exploring multiple surfaces through touch. We may start to pay attention to the overlooked sights in our familiar settings, or explore the material qualities, histories or origins of the elements on the built environment that seem unremarkable, thereby making the familiar world strange in our own ways. Nan Shepherd (2008, p. 79) notes that as far as visual experience is concerned, such shifts in sensory attention can "drive home the truth that our habitual vision of things is not necessarily right: it is only one of an infinite number, and to glimpse an unfamiliar one, even for a moment, unmakes us, but steadies us again."

Second, by deploying more-than-representational ethnographic techniques to defamiliarize familiar spaces, the creative practices identified earlier, from the psychedelic architectural experiments of the 1960s to contemporary works that extend, critique, and reveal our normative modes of sensing with light color and darkness, have the potential to engender what Jane Bennett (2001, p. 5) calls "re-enchantment," through which we "notice new colors, discern details previously ignored, hear extraordinary sounds, as familiar landscapes of sense sharpen and intensify." During such experiences, we may become "transfixed, spellbound," not only by being charmed and delighted but through the peculiar experience of "being disrupted or torn out of one's default sensory-psychic-intellectual disposition." A curious disposition toward our familiar environments and those that seem radically strange surely enhances the richness of our own sensory experience while simultaneously deepening our connections to places. But it also allows us to identify the multiplicities of places for fellow academics

and other readers, to focus on how places and things might be construed, described, and experienced otherwise, beyond normative ethnographic perspectives. Such approaches can decenter the modes of sensory apprehension through which we understand place and expand the potential for reconfiguring the design and regulation of places, to establish dissensus about the ways in which places and landscapes are sensorially managed and interpreted by the powerful.

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28
SENSING THE AFTERLIFE
Multisensorial ethnography and injured minds

Michelle Charette and Denielle Elliott

Sensing the self

As chapters in this handbook have demonstrated, sensory ethnography is an invaluable technique for researchers interested in elucidating the granular and collective elements of human sense-making. Nevertheless, while sensory ethnography can carve out new terms, territories, and modalities of sense, there is still a private element to sensation that can never be fully exhausted by description. Such failure of description is especially evident in the case of what we refer to as the "afterlife." The afterlife, as we show in this chapter, is both a social phenomenon and a subjective one that forces us to come to terms with the limits of sensory ethnographic investigation and to reimagine the possibilities of sensory inquiry in a context in which selfhood is explicitly foreign or unconveyable. How should we think about these separate layers of sensation, that is, inner or subjective sensations versus sociocultural mediated sensations? As Desjarlais (2003) asks, "how do different sensory modalities and dispositions play themselves out in individual lives" and how do "members of a single society live out different sensory biographies" (p. 4)? These questions shape our approach to the sensorial, injured minds, and the shifting sense of self in the context of the afterlife.

As interdisciplinary scholars, we draw on a range of analytic approaches to understand the boundaries and limits involved when researchers attempt to speak about or uncover what it means to feel or not feel "like oneself." Two debates that repeatedly emerge throughout the anthropological and philosophical literature about selfhood are (1) whether the self is bounded or free, and (2) whether personality is a unified whole, or multiple. Anthropologists have long been concerned with the self and personhood. Clifford Geertz defined the self as a "bounded, unique, more or less integrated motivational and cognitive universe, a dynamic center of awareness, emotion, judgment and action organized into a distinctive whole and set contrastively against other such wholes and against its social and natural background" (Geertz, 1984, p. 126). Whether researching behavior, agency, or resistance, psychological, linguistic, and sociocultural anthropologists have all variously engaged with the question of selfhood. Traditional frameworks for exploring these questions tend to engage with the extent to which, and how, a person may be bounded, that is, determined

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by something other than their will. They engage with either the subjective dimension of the experience of selfhood, sometimes referred to as egocentrism, or the social dimension, sociocentrism.

The premise underlying these two dimensions is ontological; it assumes that the experience of personhood is constituted by either something internal (the ego or soul, for instance) or something external (our surroundings and cultural habits). Keith Murphy and Jason Throop (2010) refer to the two approaches as "culture as a barrier to volition" or "culture as a sculptor of volition" (p. 7). But as Jeannette Mageo (1995) rightly points out, these dimensions exist on a continuum, and whichever of the two is highlighted cannot exhaust the experience of, or explanation for, what makes a self.

Anthropologies of the self will always entail ontological premises which are themselves cultural theories. We accept that the self qua personhood is, in part, structured by the social. Indeed, we think of the senses as socialized, elaborated through their use and value status (Classen, 1993). However, the best anthropologies of self will view culture and the will as enmeshed, and approach the topic of personhood empathetically, grasping the other as "a center of intentionality, *as a different perspective* on the very world that [we] also inhabit" (Throop & Zahavi, 2020, p. 286, emphasis added).

Philosophers tend to conceive of the self as linked to or shaped by conscious experiences and self-representations. These are, in part, shaped by sensation and the external world. Sensationalists such as Thomas Hobbes took up the causal connection between sensation and self in a strong sense: "for there is no conception in a man's mind which hath not at first, totally or by parts, been begotten upon the organs of sense" (Hobbes, 2008, p. 1). According to this view, all our mental states are reducible to elementary sensations. But sensationalists mistake the body as an exclusively reactive and passive object. Embodiment, on the other hand, which is a central theme in early European phenomenology, examines how bodily aspects of sensation give rise to and shape human subjectivity. The lived, phenomenal body is not a physiological machine, whose cognitive states are determined by specific sensations—it is *my* body, or *your* body. The phenomenal body is one that derives specific meaning from being-in-the-world. Sandpaper feels rough against the skin of my palm, but less so to the painter. The smell of freshly cut grass reminds Michelle of her childhood, and this sense, in part, makes her the kind of being who buys candles of the same scent, or likes to sit outside while her neighbor mows the lawn.

In contrast to anthropology and philosophy, scientific disciplines focused on the brain (psychology, psychiatry, and neurology) have understood the term "self" to entail a different kind of boundedness, one that is governed by neural pathways and brain chemistry. This "self" is reified as a stable entity, reducible to the molecular composition of the individual. Innovations in neuroscience, while unquestionably positive in many ways, have transformed life itself (Rose, 2001). Nikolas Rose (1996) argues that this shift enables science to yield economic values in different ways.[1] Not only do these traditions tend to distill personhood to brain scans, genetic determinants, and behavioral mechanisms, but they also transform how we speak about the self within and *outside* biomedical spaces. The idea of the neurological is pervasive as the basis for selfhood. We will return to this in our empirical section when we discuss the theme of the unconveyable. Many of our interlocutors struggled to convey changes in the self, and some relied on using the language and symbols of neurological institutions. As Matthew Wolf-Meyer (2020) writes, neurological institutions produce particular kinds of subjects, and they rely deeply on the ability of individuals to imitate the signals they receive. Thus, the symbolic system ushered forward by neurology is an institution unto itself.

Critical or social studies of neuroscience try to reroute conversations about brains and self away from natural givenness, "re-inscribing the objects of neuroscientific practice back within the webs of social, cultural and historical context to which they are always inevitably subject" (Fitzgerald et al., 2014, p. 2). However, there has been very little writing on traumatic brain injuries that engages with the social studies of neuroscience. The focus of critical neuroscience has largely been on labs and clinicians in the social study of neuroscience (see Cohn, 2008; Kay, 2000; Rees, 2010). What would it mean to apply this critical perspective to the experience of living with an injured mind? The social studies of neuroscience might expose the journey that mental phenomena, qualia, sensations, and brains take on their way to becoming objects of study to which notions of facthood apply.

Suffice it to say that selfhood is a puzzle to many. While we might have a story to tell about why the experience of *feeling like oneself* registers or feels the way it does, the self will always spill out over the sides of these explanations. The self may be shaped by a conglomerate of causal mechanisms: the social worlds we inhabit, and the behaviors shaped therein, bruised brain tissue, the shape of our bodies, and the content we consume. Be that as it may, perhaps it matters less *why* we are ourselves than *that* we are ourselves. A possible consequence of privileging expressions of self, and various forms of accounts that aim to capture this supposedly "inner" feeling, may be that we get closer to understanding what selfhood entails. The self is both a unity and a multiplicity. We must think about the self, and study the self, and never temper our own curiosity about this seemingly unanswerable question.

Sensing the afterlife

Brain injuries often result in profound changes in self-awareness and ability, something that many find difficult to explain to those who have never experienced brain trauma. Claudia Osborne, an internal medicine specialist, was hit by a car while biking. Landing on her head, she sustained a traumatic brain injury. Osborne (1998) writes that her memoir is about the "grief accompanying the loss of one's self" (p. xii). Similarly, Jane Cawthorne writes in her edited collection of women writing after concussions that, "my biggest lost is me. I am lost. I'm lost to myself" (Cawthorne, 2021, p. 18). Based on a series of qualitative open-ended interviews with individuals who self-reported having neurological conditions and autoethnographic insights from the co-authors, in our research we explore the sense of *afterlife*, a transformation of the self, or the rebecoming that results from brain injuries.

Whether resulting from bike accidents, strokes, intimate partner violence, or bacterial infections, brain injuries are treated generally by neurologists who monitor for cognitive or mental impairments, seizures, sensory sensitivities, and other symptoms. Neurologists rely on various diagnostic tests (like the Glasgow Coma Scale and the Montreal Cognitive Assessment test) and visual imaging, including computed tomography (CT) and magnetic resonance imaging (MRI), to assess brain bleeds, lesions, and other physical damage and metabolic changes to the brain. People feel and are transformed by brain injuries: different, but the same, sometimes lost, sometimes just otherwise. One's sense of self is often deeply altered as the mind makes sense of trauma, accidents, violence, and as neurons reconnect, reconfigure, and heal. People experience feeling as though they are a strange (sometimes foreign, sometimes friendly) new iteration of their former selves. But such transformations are not of the purview of neurology; patients are forced to make sense of their new slightly (or dramatically) altered self, this rebecoming, on their own or as they seek counseling and therapy with neuropsychologists.

In Canada and the United States, we have witnessed an increased incidence of brain injuries, with most resulting from falls and motor vehicle accidents (Kureshi et al., 2021, p. 1198). Globally, more than 69 million people experience an acquired brain injury (ABI) on an annual basis (CDC, 2013) and the WHO (2004) estimates more than ten million die from their injuries or remain permanently disabled annually. In Canada, ABIs are the leading cause of death and disability for those under 40 and more than 1.5 million Canadians live with the effects of an ABI. They affect Canadians of all ages, from infants to seniors, but evidence indicates that socioeconomic status, gender, and race all play a role in shaping who is most likely to experience brain trauma. In the United States, Indigenous peoples are most likely to die from brain injuries (Daugherty et al., 2019; Peterson et al., 2019). Veterans and soldiers report unusually high rates of brain trauma which surprisingly occur outside of active duty, appearing alongside increased rates of depression and post-traumatic stress disorder (CDC, 2013; Garber et al., 2014). Among the unhoused, 53% have had a brain injury, and most injuries occur before homelessness; many of these cases occur alongside of mania, schizophrenia, bipolar disorder, and suicide ideation (Stubbs et al., 2020). Here we explore what sensory ethnography might offer in deepening our understanding of this deep metamorphosis of the self among those living with brain injuries.

The theme, sensing the afterlife, emerged throughout a series of qualitative open-ended interviews with individuals who self-reported having neurological conditions. Research participants were invited to join through recruitment posts on social media, referrals from other interviewees, or were previously known to us and met the criteria. The final group included 16 individuals with a greater proportion of women identifying participants than men. Due to COVID-19 research restrictions, all interviews were conducted virtually. This had implications for types of sensations that we could share with our interviewees, as discussed later. All the interviews were in-depth, ranging from one and a half to two hours in length.

It is never simply words, spoken and heard, which give rise to ethnographic knowledge. Listening involves more than just being attuned to speech and language. In drafting our interview questions, we considered the interview as a multisensory encounter. We set out to extract meaning from the senses emphasized or repressed in each interview. Our interviews included questions as follows: "How do you notice hypersensitivity to temperature?" "How does your medication make you feel?" "How does clothing feel on your skin?" "What is your memory like today?," "What does [x] smell like to you now?" "What does a brain injury sounds like?" (Charette et al., 2022).

By foregrounding sensations, expressions, and embodied articulations of life, sensory ethnography can resituate the scientific brain back into its experiential context. There is more to be gleaned about the self by attending to the way we describe, show, and *perform* feeling and sensing. Sensory ethnography is deeply shaped by phenomenology, a tradition that is critical of the idea that language is objective, the body and the soul are separate entities, and that we must doubt experience. Sensory interviewing entails focusing on gestures (verbal and non-verbal), as well as the material components of conversation. For instance, several interviewees showed us objects, drawings, and artwork that was central to their recovery and healing process (see Figure 28.1).

Thus, uncovering the sensory profiles of our interlocutors was done not only through verbal exchanges but through unexpected interruptions and expressions. Treating the interview as a sensory event required creating a shared place of comfort, such that these sorts of non-verbal exchanges could happen and thereby draw together more than just data but also *sensed* embodied experiences, emotions, and material engagements. Since all the interviews

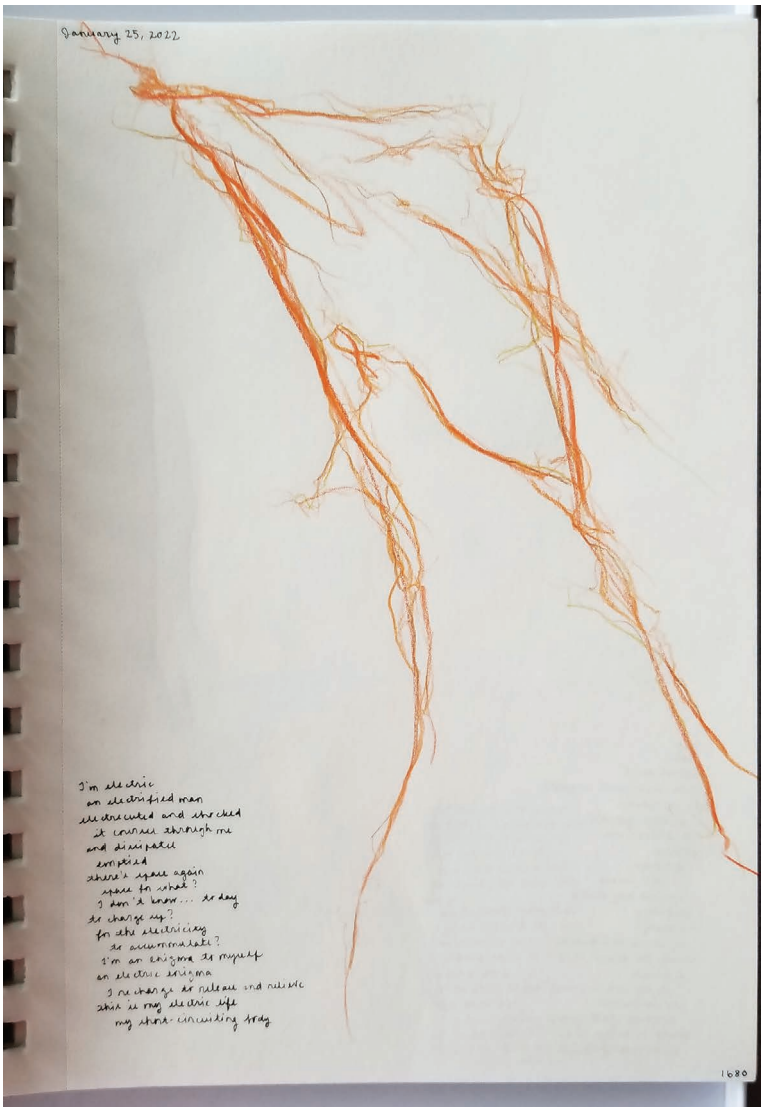

Figure 28.1 Artwork generated by a research participant.

were conducted virtually, there was an inevitable privileging of auditory and verbal sense in the interactions. Notably, taste and smell were off the table in terms of sharing a sensory experience—we did not share tea with our interviewees, nor sat together on the same type of chair. Nevertheless, spatial sense was communicated through sounds, sights, blurry or empty screens. In one case, an interviewee brought us (via his phone) to his car to obtain a better internet connection. In another, the interview was briefly interrupted so that the participant could put her laundry into the dryer. In another, the "ding" of an incoming email made us keenly aware of the other's social responsibilities. In another, the sound of a child laughing

in the background reminded of the duties of motherhood, shaping the instantaneous question that followed about how motherhood interacts with the experience of living with an injured mind. These moments filled the interview with sensory information that traditional interviewing might disregard.

In addition to drafting questions that foregrounded the sensory, we wanted to ensure that our interlocutors had space to discuss their stories—the significant moments, thoughts, feelings, desires, and anxieties. Our open-ended narrative approach entailed a somewhat relaxed and slow-paced discussion. We listened with acuity, paying attention to movement, pauses, and facial expressions. After establishing a mutual space through questions of place ("Where do you make your home today?" "How is the weather in [x]?"), interviewees were asked to talk about the moment of their accident or diagnosis ("Can you tell me about the day you were diagnosed?"). Despite being a difficult and complex question, it was well tailored to the narrative approach. All participants tended to respond at length and in detail, about the events leading up to their brain injury or mind-altering event with little to no prompting. Often, in their response to this question, they anticipated further questions, and this allowed for an improvisational and ever-changing interviewing style.

To augment the limited number of interviews that we carried out and to capture the sensorium of living with an injured mind, we also draw inspiration from a series of biographies and memoirs by a range of people who have written about living with brain injuries. These memoirs are detailed and often graphic accounts of accidents (bikes, automobiles, ice skating, falls) and illnesses (bacterial infections and strokes) that left the authors forever changed. Those changes include symptoms like chronic pain, migraines, confusion, dizziness, personality changes, depression, sensory sensitivities, and amnesia, but they also include the sense that one's former self has been lost, and that the injured person must rediscover a new self, a new identity, who has emerged post-injury. Drawing on Kelty and Landecker (2009) and Riles (2006), we treat these texts ethnographically, as more than just written memoirs but as "informants" in their own right. They too offer sensory profiles of the authors that speak to afterlives and a sense of rebecoming in the face of injury or illness. These include memoirs written by medical doctors (Osborne, 1998) and neuroscientists (Taylor, 2006), as well as patients made famous by their doctors' accounts (Corkin, 2013; Luria, 1972). Morin and Cawthorne's (2021) edited collection is also an important source of inspiration, as are the poignant stories of Susan Brison (2002), Su Meck (2014), Alice Anderson (2017), and Elee Kraljii Gardiner (2018).

Finally, our conclusions here are also shaped by our own autoethnographic reflections. Michelle contributes by recounting the memory of her father's traumatic brain injury. This adds an important element to the theme, namely, what it is like to live alongside someone whose sense of self is suddenly and dramatically altered. How does this afterlife get taken up by a daughter who sees it, as it were, from the outside, and yet experiences it herself through an altered relationship? She reflects on the sensory changes in her and her family's environment as borne out through the memory of the sound of her father's damaged vocal cords, the texture of broken blood vessels over his skin, the squish of the yellowish substance connected to his feeding tube, and the enduring emotion that colors these memories of hardship and healing, both beautiful and exhausting. Denielle also draws on her own experiences as a scholar living with the permanent effects of a brain injury to think about afterlives and the oft-inexplicable changes in self.

In all the data sources we were very attuned to the descriptions and accounts of post-injury life, the affective utterances of our interlocutors. Too often we heard participants make

profound statements about their afterlives in a way that seemed to be dismissive of their experiences. The research participants spoke clearly and often easily about diagnosis, medical care, and most symptoms. Often as an aside, offhand, or as an under the breath utterance, participants would mention a profound change in their sense of self. These affective comments highlighted to us feelings of surprise, confusion, and sometimes sadness as participants wrestled with their transformed self. While we did not adopt a formal discourse analysis of the audio interviews or transcripts, we were particularly attuned to "affective keys" (Ochs & Schieffelin, 1989) in their narratives. These casual interjections were often laden with affect, like when one of our female participants, a professor, commented, "Life is really different now than it was before I had [my stroke]." Similarly, when one of our female participants tried to explain her post-injury self as, "I [felt like I was] in a spaceship . . . at warp speed, when the stars become lines." Our sense was that these utterances were made tentatively, with hesitation, or in an affective register that suggested confusion and disappointment. Participants were still processing their new sense of self post-injury or searching for their former self amid the debris of post-injury.

Living with an injured mind entails experiencing the world in mooded and sensorial ways that can never be fully apprehended by those who do not. Fractured memories, diluted or heightened sensitivities, and inner dialogues are hidden from others, not because they exist "inside" the body or mind, but because they resist shapes and molds of translation that we might desire to put them in, not unlike trying to fit a square inside of a circle. Take, for instance, proprioception. This word refers to what Oliver Sacks (1998) referred to as our sixth sense: the combination of mechanisms that afford our bodies the ability to balance, to unconsciously know and keep track of our trunk and limbs as we move. This sensation was only recognized and defined in 1890. When the inner ear is damaged, this can cause sensations that are incommunicable. "Dizziness" does not suffice. As Sacks wrote, a defective or distorted proprioception makes the body "blind and deaf to itself . . . ceases to 'own' itself, to feel itself as itself" (72). Here we suggest that sensory ethnography offers a solution to the problem of interiority as discussed by anthropologists of the self (Irving, 2011).

Injured Minds

Our analysis of our datasets—the interviews, the memoirs, and our autoethnographic experiences—led us to consider two primary themes for the purpose of this chapter. The first is that many participants are left forever changed by their brain injury or illness, sometimes for the better, sometimes for the worse, but this changed self is often confusing, surprising, and difficult to comprehend. The second theme is that these affective and sensorial transformations are difficult to explain, almost unconveyable. In this section, we explore these two themes and consider how sensory ethnography offers possibilities for understanding the new and unspeakable.

Foreignness

Perceptual shifts, limitations, and memory alterations that individuals live with post-injury usher forth a different world. By foreignness, we mean a fractured sense of familiarity between oneself and one's environment. There were different affective reactions to this feeling, which were communicated through sighs, long pauses, eyerolls, smirks, and grimaces that preceded attempting to describe such an experience. For instance, one of our participants recounted

her experience with feeling uncannily the same and yet in a foreign world. She, a female professor, was riding her new electric bike one sunny afternoon on her way back home from visiting a friend when her front tire got caught on the curb of the sidewalk. The momentum from the motor propelled her forward as she crashed to the ground. In the emergency room, they x-rayed her elbow to make sure it wasn't broken and told her that she probably had a concussion. She recalls being handed a pamphlet. In the months that followed, many things became unfamiliar. When we spoke, she referred to her inner self as "doubled." She explained, "There aren't really words . . ., everything seems a little bit off, like a little bit removed from reality or your internal self has kind of doubled."

Post-concussion, she lost her sense of smell and can no longer smell the air. Understandably melancholic, she reminisced:

> I used to be able to smell the low tide or the sea breeze, go to the beach, and you could smell the plants and the water, and the cedar trees, or the smell of the Earth and the forest. I can't smell any of those things.

For this interlocutor, there was a clear separation from her prior self and her new post-injury self, a transformation she and many others had difficulty explaining to us.

At other times, foreignness was described as intrusive. A librarian living in New York City was diagnosed with a vestibular schwannoma caused by a benign tumor resting on her vestibular nerve. Surgery was recommended to remove it. The surgery was successful, however, she soon after developed bacterial meningitis from a surgical plate. She spoke with us about the events and changes that followed. In addition to living with a permanent headache, she now experiences brain fog, and feeling *unrooted* to the ground. Post-surgery, she felt like she was "in a science fiction movie," telling us "I found that I couldn't integrate what I saw, around me into a meaningful landscape. Like I could see, but it wasn't coming together to tell me where I was in space." Pausing, she reflects on asking herself "Who am I now? [I felt] an unknown quality to myself, or a foreigner to myself." Such experiences were echoed in many of the memoirs and by Denielle.

During the interviews, some participants alluded to possible explanations for these feelings. In these cases, discussing somatic causes (neural changes, the sequence of events which led up to an accident, etc.) seemed useful or comforting. Sometimes this cut the conversation short and failed to pay heed to the sensory components of the experience. Other times, participants were able to evocatively describe what foreignness felt like without relying on somatic language, but instead by describing the changes to their sensorium. For instance, Michelle and her father talked about his injury and recovery from a coma after falling down a flight of stairs. They often chat for hours on Facetime about brain plasticity. They talk about how much he's changed over the past 15 years, and he reminisces about what he calls his "old brain." She watches his eyes scrunch up because the light is too bright, or the audio too loud. They pause, recalibrate, and continue.

Denielle also recounts her own experience of having a difficult time making sense of how she had changed. Her neurosurgeon forewarned her family that the brain injury could result in personality changes; "she might not seem herself," he said. Anger, sadness, confusion, memory loss were expected. Friends and family said she seemed the same, perhaps trying to assure her that she was OK. Yet she found these assurances frustrating because she did not *feel* the same, but she couldn't explain adequately how so. She also felt "doubled" as if there were two of her, pre-injury and post-injury (see Elliott, 2022). Morin asks, "Who do

we become after a trauma, when we're not the same person as before, when we can't do the things we once did, the things we thought defined us?" (Morin, 2021, p. 133). What would it mean for us to consider the experience of brain injury as the transformation of self through unfamiliarity? This would broaden our understanding of selfhood to include the existential ramifications of feeling spatially and internally dislocated or lost.

Unconveyable

In all interviews, we asked our participants if they thought about their condition as a disorder, illness, disability, or possibility. We asked this question to foster dialogue about "negative" *and* "positive" (or value neutral) changes in the self. Many responses to this question hinged on the expressive restrictions resulting from brain injuries. Others hinged on the possibilities necessarily opened by these restrictions. For instance, many remarked that their lives had become more difficult. Interviewees spoke of needing to use specialized technology, whether for reminders or note taking. Some also needed to take regular rest-intervals throughout their days. These facts often complicated their work lives because symptoms of brain injuries are difficult to communicate in standardized terms. These communicative boundaries posed significant challenges to many obtaining workplace accommodation. This also impacted their engagement with medical experts. As one participant told us, "I felt very unheard a lot of the time. The doctors didn't really want to talk with or listen to me."

Those who responded positively to the notion of brain injuries as ushering forward new possibilities sometimes connected this idea to the development of a new creative practice. A dancer and educator living in Toronto spoke to us about his history being diagnosed as a "pseudo-epileptic." He told us that medical professionals were unsure exactly what was the cause of his spasms and seizures, but he has been having them since he was 10 years old. No MRI, CT scan, EEG, or sleep study scan displayed epileptic activity, hence the diagnosis of pseudo-epilepsy. He shared with us that, to him, "it feels like they don't know what I am." He describes feeling betrayed by his body and feeling like he should let go of the diagnosis because

> [t]hey couldn't tell me anything . . . I had to really search within to understand what these spasms were . . . . I've been thinking about what it might be like to draw out the spasms, and I've done it a couple of times in my sketchbook. In one instance, it was red and quite . . . the drawing was quite aggressive or . . . . Yeah, quite aggressive. It was just quite intense, intense is a better word, and it's because of how I felt in that spasm, but it's not a representation of the spasms in general because they vary.

Several participants reported turning to art to express the unconveyable post-injury. The language of measurement often failed to capture the dynamic and multisensory nature of their experiences. We spoke to a Canadian scholar who explained the testing procedures that took place after her stroke. She was repeatedly asked to take the Montreal Cognitive Assessment standardized test for dementia, which involved counting backward starting at 100, subtracting by sevens or identifying specific animals in pictures. She recounted confusing a hippopotamus with a rhinoceros during one instance of the test. Provoked by the memory of this, she sarcastically questioned its utility: "so . . . yeah, well, next time, when I'm on my way to work and I get accosted by a hippo or a rhino . . . . It's completely irrelevant whether I can tell the difference between a hippo and a rhino." She reported feeling unheard by clinicians

and decided ultimately to seek therapy from an art therapist instead of a post-stroke counselor. Many interviewees mentioned engaging in more art practice post-injury, from drawing to comic-making, to poetry, and dance.

Some participants relied on creative metaphors as a way to help convey their experiences. Describing grocery shopping in New York City, the participant recovering from a vestibular schwannoma and bacterial meningitis recalled feeling "like a balloon, connected to strings on the ground, rather than a person on legs." She clarifies that this sensation is not akin to feeling as though she might fall down, rather, "it's like I lose my sense of vertical . . . touching the wall helps . . . snap everything into squareness." Metaphorical imagery succeeded at expressing a dynamic perceptual phenomenon that medicalized words make one-dimensional. Another participant recovering from COVID-19 described her most severe symptom as feeling as though she had been poisoned.

> My skin gets all prickly, especially around my face and my arms, my skin. I feel like everything is inflamed and my nose feels inflamed, my mouth feels inflamed, and it starts to cramp up. Okay, and then this metallic taste . . . all through my stomach, chest, into the jaw, and everything. It's cramped. And then it's just this unwell feeling that I imbibed something . . . it's making me feel like I just had a glass of lead or something.

The above utterances foregrounded communicative challenges, but also gestured toward the malleability of expressive practices. These challenges were to be expected; individuals who depend upon medical systems are bound to inherit norms of coherence espoused by the very such institution they rely upon for care. However, as Berkhout and Stern (2019) write, these expectations make certain aspects of the post-injury self unspeakable. As such, many interlocutors had to find new ways of expressing these new, puzzling sensations.

Conclusion

While it may be true that concussions and other brain injuries do not leave visible traces on the body, descriptions of living with ABIs attest to the body's involvement in sensing the afterlife. As Morin and Cawthorne (2021) write, brain injuries wreak havoc on our identities, causing some to hide in dark rooms. Light perception, a seemingly benign sensation, causes new phenomena to emerge, forcing individuals to recalibrate and make sense of themselves anew. The significance of these transformations should not be understated. By re-privileging the body and its capacity to sense the world in specific and patterned ways, sensory ethnography may offer a way to convey, *palpably*, what it is like to no longer feel like oneself when diagnoses (or lack thereof), medical terminology, or statistics cannot.

We hoped the interview space would be a context where participants could talk about some of the inner experiences of brain injury or illness that they felt uncomfortable talking to others about, the delusions, aural hallucinations, temporal gaps, and the discovery of the stranger they had become. Like words and their meanings, some sensations only exist in one language, in one person, in one era. However, multisensory knowledge can capture elements of these experiences, thereby making them slightly more perceptible than language can on its own. Sensory ethnography might be our best bet at capturing something about these largely imperceptible experiences by giving shape to what it is like to become otherwise, to live in the aftermath of an event that changes the self, one's world and, sometimes, the world of those around them.

Sensory ethnography offers a way to sketch out details about the unification of self, body, and the world. We learn, for instance, of the significance of *taste* in its power to disrupt when food, water, and air taste different than before. Pulling back the proverbial curtain here might involve a discussion of the tiny papillae on our tongues that contain tastebuds and their protein receptors, and why a brain lesion halts a sweet tooth. Or how and which human beings have evolved to crave sugar. But this does not add to the affective and existential dimension of tasting and feeling otherwise. Recall the statement from our one participant about the way that taste, specifically the sensation of having consumed lead, disrupts her goings-on. We ask you, our reader, to imagine what it would feel like to sense being poisoned at regular intervals throughout your work week. Or this perception, *as such*, that is, for *her*, a person for whom it is important to work independently and without rest intervals. How might this exercise inform neuroscientific training? Or the way we speak to one another, post-injury?

We also learned about the impacts of *smell* (forgetting the smell of the sea, or being unable to smell coffee), of new *temporalities* (commuting and completing work or errands more slowly), and of *embodied mobility* (biking through the city with caution or navigating a grocery store with a walking aid or partner). Crucially, we resist the urge to describe sensory ethnography as truth-oriented per se. Sometimes it is appropriate to sidestep matters of fact and causal concerns to instead spotlight affect and impact. The narrative and sense-based descriptions above do not necessarily reveal the divisions between the body and its performances, on the one side, and the molecular, neurological, or sociological mechanical underpinnings on the other. We should retain some awareness of the invisible processes of healing and injury, and what they may or may not permit. But these are almost certainly irrelevant to descriptions about *what it is like* to feel the world differently, to *feel changed*. The value of our approach resides in its focus on somatic capacities and sensations, and in remaining open to their experimental articulations. Through this, we note in new ways the extent to which perception and sensation co-determine identity. A focus on the sensory broadens our account of the self by showcasing the incredible heterogeneity within its boundaries: humans and non-humans, habits, shapes, expectations, textures, tissue, and whatever other many things that comprise our living, breathing, and evanescent sensory landscapes.

Note

1 A logic of morbidity, focused on treating "problems," identifies areas for new therapeutic and curative technologies (think: antidepressants). A logic of vitality identifies areas for surplus health and is therefore an asset-oriented form of economics (think: mental wellness programs).

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29

STAGING UNMEMORIALS, BEING HAUNTED

The grievability of Japanese sex workers in the transpacific underground

Ayaka Yoshimizu

I acknowledge that part of my research presented in this chapter
takes place on the unceded lands of the
xʷməθkʷəy̓əm (Musqueam),
Sḵwx̱wú7mesh (Squamish),
and səlilwətaɬ (Tsleil-Waututh) Nations,
and that there are a countless number of Indigenous children
who were buried, unmarked, in their stolen lands
and their deaths are yet to be accounted for.

Video 29.1 Unmemorial 01 (https://youtu.be/0EpPXvBNSbc) July 19, 2018, noon. I spot a rectangular depression at the Chinese/Japanese section of the Mountain View Cemetery in Vancouver. According to the plot number given by the City of Vancouver's online burial index, this may be the grave of Kuni Matsuno.[1] It is hardly believable that this is a marker. I remove the grass that covers the depression and try to see what is underneath. But as I take the grass out of the way the surface crumbles at my touch. Can a stone decay this much? I have seen many other gravestones from the same time period that are cracked or have their engravings faded, but not one that crumbles. I video record the spot and start to move the recorder closer to the ground. On the screen, I see it crawling with ants, a number of them, and they move in all directions as if there is nothing underneath—maybe there is nothing underneath.

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This chapter presents my embodied and emplaced engagement with the materiality of the memorials (or lack thereof) that are linked to the deaths of Japanese sex workers who lived in the transpacific world and were engaged in transnational and interracial sex trade from the second half of the nineteenth century through early twentieth century. Doing archival research and fieldwork at old cemeteries and memorial sites, I encounter the "ungrievability" of deaths that occurred in the multiracial, underground society (Butler, 2004; Jiwani, 2016)—headstones that seem unmaintained and unattended, absence of markers that make invisible their burial locations, and anonymous graves. I call them *unmemorials*, memorial objects or sites that are meant for commemorating lost lives or past events but whose

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memorializing functions are undone or undermined due to the absence of the memorial objects, commemorators, or narratives that enable commemoration. Embodied engagement with unmemorials through performative sensory ethnography, however, makes their ungrievability *sensible*, and opens up a possibility to "apprehend" (Butler, 2009, p. 4–5), if not properly remember, migrant women who lived in underground transnational space.

Performing and sensing: doing ethnography of non-humans

I consider my methodological approach ethnographic rather than historical as well as "performative" rather than "informative" in Fabian's (1990) terms. That is, instead of viewing archival materials or historical objects as primary sources that inform me, a detached researcher, of the past from which to reconstruct a possible account of the distant past, I performatively interact with them to create an occasion for embodied knowledge to be generated about and in the present. Generally speaking, ethnography is an outcome of intersubjective processes of living, working, and doing things together (Culhane, 2017b; Fabian & de Rooij, 2008). Interacting with those we study through some form of communication is fundamental to ethnographic research. Ethnographers do not "discover" information that exists apart from their own presence in the field, but they become part of the shifting relations that constitute what they study while instigating knowledge to take shape through their interactions with others. In the critical tradition of anthropology, as Fabian (2014) characterizes, ethnographic research is openly acknowledged as "coproductive," rather than an independent and autonomous endeavor, which involves "confrontation" and "a struggle for recognition" (p. 206).

One of the questions that preoccupies me when I visit graves of Japanese migrant sex workers is how I should greet them and introduce myself to them when I pray for their spirits. Obviously, however, the deceased or objects (or lack thereof) that commemorate their past lives do not speak back. They do not "confront" me in the same way as how living humans do. How then is it possible to performatively engage with non-humans? Instead of attempting to present a conclusive answer for this question, I would rather bring together two traditions of what Culhane and Elliott (2017) call "imaginative ethnography," performance ethnography and sensory ethnography, to start exploring this question.

Both performance and sensory ethnographies make an epistemic intervention and raise critical questions of how we (do not) know and what (does not) gets to be known. Performance ethnography is "particularly attuned to how bodily and affective experiences are part of ethnographic practice" (Culhane, 2017a, p. 11). Those who practice "performance as ethnography" (Kazubowski-Houston, 2017, pp. 114, 122), as opposed to ethnography of performance, center embodied theatrical experience of performing *with* people with whom the researcher works as a means and process of ethnographic knowing (Conquergood, 2002; Hamera, 2006; Madison, 2006). In my research, as I discuss further in another section below, I "stage" (Nayyar, 2021) unmemorials by visiting and interacting with them, and photographing and video recording my performative encounter with them. My interactions with unmemorials generate subtle moments of non-human confrontation that unsettle, surprise, and confuse me, and ultimately shift the way I *feel* the ungrievability of the women.

When studying an elusive past through an engagement with non-humans, being attentive to non-representational, bodily, and affective experiences and manifestations becomes particularly important, precisely because they hardly provide or produce a discourse, story, or textual(izable) data that can be processed through a detached and disembodied analysis. Thus, my performance ethnography inevitably relies on multisensorial engagement. Sensory

ethnography places priorities on the sensible in the ethnographic process of knowing. It begins with premises that "humans are embodied, multisensory beings" that are entangled with other beings, including humans, non-humans, and natural, social, and virtual environment, together co-constituting and making the world (Culhane, 2017b, p. 46). Often those who practice sensory ethnography view their own bodies as concrete, embodied, and emplaced sites of knowing (Pink, 2015; Stoller, 1997). At the same time, what and how we sense and perceive are also social, cultural, and political (Bull et al., 2006; Howes, 2022). I pay attention to what my body knows and how my embodied experience is both enabled and circumscribed by my socioeconomic and political places that I occupy as well as my race, gender, sexuality, and ability. While my ethnographic representation is specific and partial, it is also not completely personal or isolated because my way of being and knowing is always inflected by how others, both humans and non-humans, confront and affect me and my body during my research.

After describing the historical context and further discussing my approach to studying memorials, the remainder of this chapter presents incomplete, short ethnographic fragments from my fieldwork in Vancouver through my writing, short video clips, still images, and archival materials. I restage my encounter with unmemorials to show "haunting" as a process-oriented, non-representational, and ethical approach to reimagine the way we live with unresolved pasts (Gordon, 2008; Powell & Shaffer, 2009).

Place of my research: transpacific underground

This chapter comes from my ongoing research situated on two sides of the Pacific Ocean in Japan (primarily Yokohama) and Canada (primarily Vancouver and other parts of British Columbia), which has been carried out only sporadically and disrupted due to COVID-19 pandemic as well as the nature of my teaching-focused position in university. While my research is multi-sited in one sense, these two port cities constitute my transpacific lifeworld and are connected through my personal, family, and work relations. I am not from Yokohama, but my family and I lived fairly close to the city throughout my adolescence, and I spent a significant time in and around the port. Later I conducted ethnographic research in Yokohama in the early 2010s on the displacement and memories of transnational sex workers. During this research, I met my partner, and through our marriage the place became my new familial home. In 2004, I landed in "Vancouver," initially unknowing that the place was the unceded lands of Coast Salish peoples, and have continued to live, study, and work in their lands as an uninvited guest. This is a place where I ended up settling, making a living, and having a small family, as I benefit from the resources the lands provide. My fieldwork in these places occurs not during devoted and reserved periods of research, but in-between, or as part of, my life, regular work, family visits, and everyday activism.

At another level, Yokohama and Vancouver have also historically been well connected through migratory networks that constituted what I call "transpacific underground," an illicit and stigmatized space of interracial sex, intimate labor, and transient migration that emerged as the undercurrent of imperial expansions and settler colonialisms in the pacific region in the mid-19th century (Yoshimizu, 2021). In Japan, the transnational sex trade was important part of the country's modernization and the subsequent process of empire-building, which began in 1859 with the "opening" of the previously officially secluded country to the international trade with western powers. Yokohama was designated as one of the major treaty ports by the Edo government, and the opening of the port involved the construction of a pleasure quarter called Miyozaki Yūkaku to cater to Western male clients. In 1860, the

district housed 15 large brothels and 44 *tsubone-mise*, or single-sized sex shops, and in total of 570 women working there (City of Yokohama cited in Kawamoto, 1997, p. 96). The pleasure quarter went through multiple relocations after the 1867 great fire burnt down the district, killing over 400 people, including a number of sex workers (Nakaku, 1985, p. 200). Women who provided sexual services for foreign clients were called *rashamen*, literally wool clothes or blankets, which to the minds of the Japanese was closely associated with Westerners and the exotic culture they brought into the country (Kawamoto, 1997, p. 69). Rashamen signified the women's fashion, as they started to wear wool provided by their clients, and themselves being like "beasts," the very source of the material. In addition to being stigmatized for being sex workers, they were targeted for further marginalization for having sexual contact with foreigners, which would make them "beast-like" (Mitamura, 1977, p. 253) as well as "traitors" in the eye of nationalists (Ikenushi, 2018).

During the same period, women from Japan also engaged in interracial sex work outside the country. Women from impoverished farming and fishing villages were gathered for sexual services aimed at young men working in colonial ports and plantations, and for the construction of railways in other parts of Asia, Russia, Australia, North and South Americas, India, and Africa starting in the 1850s (Ichioka, 1977; Kurahashi, 2000; Mihalopoulos, 2016; Nagata, 2004; Oharazeki, 2016; Shimizu & Hirakawa, 1998; Yamazaki, 1995). Large and small ports in Japan, such as Yokohama and Kuchinotsu in Nagasaki, and Moji in Fukuoka became key points of women's migration routes that were extended overseas through the underground transpacific networks. These networks, organized through feudalistic and exploitative human trafficking system, provided socioeconomic infrastructure that facilitated movement of women in the transpacific world. The transpacific underground was characterized by hyper-mobility and transience, as individuals who traveled across this space moved, compelled to move or forced to move quickly from one place to another due to the changing regulations of sex work, immigration laws, immediate risks and danger, the precarious conditions of their life and work, and better opportunities elsewhere. This transient space was simultaneously characterized by a high level of carcerality (Yoshimizu, 2021). Women were confined, physically and socially, and had very limited control over where to move, where to live, and even where to die.

According to historical studies by Yuji Ichioka (1977) and Kazuhiro Oharazeki (2016), sex workers constituted the pioneer group of women in the Japanese migrant communities in North America. In Canada, Japanese brothels started to develop along the Canadian Pacific Railway and in mining towns in the last decade of the nineteenth-century under the economic structure built by European settlers, which involved the displacement and dispossession of Indigenous peoples as well as exploitation of racialized migrants who were mobilized as cheap and disposable labor. Asian migrant women were also mobilized as cheap and disposable reproductive labor to serve working-class men with diverse racial backgrounds (Woon, 2007/08; Oharazeki, 2016), and Japanese brothels were quite active until around the early 1910s.

Grievability

In her books *Precarious Life* (2004) and *Frames of War* (2009), Judith Butler explores the mechanism through which certain lives become more (un)worthy of protection and (un) grievable in the context of the US war on terror. While certain lives are "highly protected, and the abrogation of their claims to sanctity will be sufficient to mobilize the forces of

war," other lives such as Arab peoples "fall outside the 'human'" and do not "even qualify as 'grievable'" (Butler, 2004, p. 32). Drawing on Butler's notion of "grievability," Yasmin Jiwani (2016) studies the representation of Indigenous women in obituaries in Canada. She argues that extremely limited and skewed representations of Indigenous women in obituaries significantly undermines the possibility of inscribing their daily struggles and achievements in the country's collective memory. Ungrievability of Indigenous women reinforces their "diminished . . . status within the nation-state" (p. 397).

Studies of differentiated distributions of human remains at cemeteries show how grievability is performed at a material level and whose deaths are made more (in)visible over others in the landscape of mourning. Graves that belong to minoritized groups in Canada, such as Indigenous peoples, racialized groups, women, religious minorities, people of lower class and low status, and disabled people, are often marginalized in cemeteries, segregated and relegated to the farthest corner or edge (Guibord, 2013), neglected to the point where they are eroded from the landscape (Watkins, 2002), often unmarked and identified only by their ethnicity in the burial records in a derogatory manner (e.g., "Chinaman #1, Chinaman #2, and so on; Lai, 1987), or even removed and their traces are deliberately erased (Feindel, 2019). As I was writing an earlier iteration of what became this chapter in the summer of 2021, the "discovery" of hundreds of unmarked graves of Indigenous children at former Indian Residential School sites began to be reported through Canadian and international media outlets. Since May 2021 when the first news report came out with the discovery of 215 graves in Kamloops, BC, a number of other unmarked burial sites have been identified.

Like other lives of minoritized groups, the lives of sex workers engaged in transnational sex trade are made invisible through "differential distribution of grievability" (Butler, 2009, p. 24). In Canada, the stories of Japanese sex workers are hardly recorded in English-language archival materials, because of their undocumented and transient status and involvement in the underground economy as well as racism and the general indifference to individual experiences of "Oriental" women in the mainstream society. Using Japanese language sources (Osada, 1908–09, 1912; Kudo, 1991), I have been able to locate some grave sites in Western Canada in which Japanese migrant sex workers are buried, including cemeteries in Cranbrook, Nelson, and Vancouver in British Columbia and Saskatoon in Saskatchewan. Consistent with the findings of the aforementioned studies, their graves are usually clustered together if there are multiple, pushed to the extreme periphery, isolated, and/or unmarked (Yoshimizu, 2018).

In Yokohama, I found collective graves and other material objects that are linked to *rashamen*, but they are anonymized and provided no knowledge of the individual women. In Japan the impossibility of knowing the identities of those involved in the sex trade is usually deliberately produced to ensure the anonymity of women engaged in a highly stigmatized occupation. While the practice of anonymized burials can be considered "ethical" in the given sociocultural context, it contributes to making their lives ungrievable, and thus perpetuates their status of falling outside the "human" and rather of being "beast-like." In fact, one of the collective graves of *geiko* (entertainers in the pleasure quarters), which was built in 1890 and currently located in the Kuboyama Reien cemetery is not unlike the collective graves of livestock and other animals found elsewhere in Japan.

Another anonymous grave, which was built in 1891 by the owners of 61 brothels in Eiraku-Maganechō, the last location for yūkaku, or pleasure quarter, after multiple relocations (Nakamura, 1996), was no longer there in Kuboyama Reien in April 2019. According to a priest at Jōseiji that managed the memorial, the temple built a new memorial 17 or 18

years ago and all of the old headstones of collective anonymous graves went through a ritual to remove the spirits out of them. However, the new memorial, which is a little storage, houses the remains of a number of individuals irrespective of the time period in which they originally arrived at Jōseiji and the circumstances under which they came to be buried anonymously. Whereas the original memorial had the names of the brothels directly engraved on the headstone, the new memorial merely says, "Reizandō" (Holy Mountain Hall), indicating the erasure of the history that the transfer involved.

Butler (2004) writes, "After all, if someone is lost, and that person is not someone, then what and where is the loss, and how does mourning take place?" (p. 32). Attending to "ungrievable" deaths is important, as Butler (2004) poignantly notes, because our lives depend on and are co-constituted as much by those we grieve for as by those whose deaths remain unknown to us or to which we are indifferent. But how can we remember lives of women who lived in the underground society over a century ago and against colonial, racist, and patriarchal forces that turn their lives ungrievable? In fact, what does it mean to *remember* them when their material remains are almost non-existent (at least publicly) and their lives are little documented?

Unmemorials

My fieldwork in Canada and Japan takes place at and around unmemorials that are linked to the deaths of Japanese women who lived in the transpacific underground as sex workers. These include graves or burial sites and other objects that have material links to those women. Unlike public memorials or monuments, these unmemorials are usually hard to find even when located in the public or semi-public space (cemeteries, temples, and alleyways) and were *not* purposely built for public commemoration with pedagogical intentions. In some cases, they are even disembodied, like the grave of Kuni Matsuno.

Unmemorials, as I define them, are not the same as "counter-monuments" that are intentionally designed to counter traditional, dominant and top-down narrative imposed by the authorities or offer a critique of the very idea of pedagogical monuments or memorials (McAllister, 2010; Stevens et al., 2012; Strakosch, 2010; Young, 2000). The absence of commemorative narrative does not reflect such a political and subversive intention but rather directly results from the women's class, race, sex, occupation, or generally lack of resources. As Kirsten E. McAllister (2010) suggests by drawing on Mikhail Bakhtin's notion of chronotope, conventional memorials strive to be "placed outside of the temporal zone of the everyday" and actualize the "chronotope of immemorial" (p. 97), resisting erosion and change. Unmemorials, on the other hand, are subject to decay, to transfers of caretakers and the medium of the memorial itself, and to transformation of their meanings. They rather enact the "Rabelaisian chronotope" (p. 121) and "are not kept free from the forces of everyday time" (p. 101).

Unmemorials are also not the same as *non-memorials* or absence of memorials or memorial practices, as historical sources, stories in the community, and the material objects themselves retain some evidence of individual or communal commemorative practice that has occurred or occur at the memorial site often with the presence of some form of memorial object as media of memory. However, these memorials barely carry the stories of the women themselves.

To study unmemorials, I draw on James Opp and John C. Walsh's (2010) work. Critiquing an existing trend in memory studies where analyses are framed "in relation to . . .

abstracted notions of nation and empire" and "sidestep the actual 'place' of memory" (p. 4), they argue that critical engagement with place is significant because "memory not only enacts on but is itself embedded, inscribed, and shaped by landscapes, topographies, and environment" (p. 5). The "palpable immediacy of local places," their material conditions, and the materiality of the memorials significantly shape acts of memory and thus need to be examined (p. 6). Like scholars who have examined the materiality of public memorials and visitors' embodied interactions with them (McAllister, 2010; Son, 2018), I also attend to how "memorial(s) engage us at a bodily level" (McAllister, 2010, p. 100). As McAllister suggests, "entering the space of the memorial, a visitor is presented with a vista, a vantage point that places her or him in a particular orientation toward the past" (ibid.). Similarly, Elizabeth W. Son (2018) studies how public memorials, such as ones that honor the women mobilized for Japanese military's sex slavery system (or the so-called comfort women) during World War II, invite visitors to perform embodied acts of care for the memorials and what is commemorated.

To examine the place and materiality of the unmemorials I bring together performance ethnography and sensory ethnography. Instead of observing and studying how others interact with the memorials, which would be practically difficult to do as there are usually no other visitors, I see my body as a site of knowing (Culhane, 2017b; Pink, 2008), paying attention to what can be learned from my embodied, performative acts of commemoration that happen during my fieldwork—visiting, praying, offering flowers, food, and drinks, and seeing, smelling, touching, feeling the materiality of these unmemorials. In fact, unmemorials often force me to search for them for a long time, fail to find them, and even when I finally locate them, hardly present any clue about what is commemorated, and disorient my "performance of care" (Son, 2018). Sometimes what I encounter in the memorial site is a bare absence of a marker. This absence, however, orients my body to other things that can be known about the site. I locate my body within the cemetery borders (often find myself on the edge) and in relation to the surrounding environment, see the emptiness of the ground, hear the sound of passing cars right across the wall, feel the intense sunlight, touch the dry grass covering the grave, am disappointed, sadden, and lost. Attending to what my body senses through (failed) performance of care is not only effective but also the last resort in engaging with a past whose documentary and material traces are lost, have been removed or repressed.

Powell and Shaffer's (2009) application of Jacques Derrida's notion of haunting in performance studies is insightful here. They write:

> According to Derrida, ethical treatment of others depends on allowing them to take whatever form they please in order to permit the possibility of difference(s) to manifest. The ethical thing to do is to allow the other, or ghost, to manifest by waiting for its arrival, openly and without expectation. In practical terms, we might stage multiple iterations of the other rather than offering a unified representation.
>
> *(p. 16)*

In my performative sensory ethnography, rather than turning the unmemorials into objects of examination, I stage unmemorials, interact with them, and perform small acts of commemoration, the process of which becomes the very mode of inquiry (Fabian & de Rooij, 2008; Nayyar, 2021); it is about being haunted, not exorcizing the ghost or bringing it to light. In this way I attempt to make the ungrievability *sensible* and open up a possibility to

"apprehend," if not fully "recognize" or remember, women who died in the transpacific underground (Butler, 2009, pp. 4–5). My ethnographic representation, then, is a restaging of my interaction with unmemorials, a space to make the ungrievability differently co-sensible.

Restaging unmemorials

The short video presented at the beginning of this chapter was recorded during one of my visits to the Chinese and Japanese sections of the Mountain View Cemetery in Vancouver. I was searching for a grave of Kuni Matsuno, whose death is briefly mentioned in *Tairiku Nippō* newspaper published on March 15, 1912. According to the article written by Shōhei Osada, she used to work in a brothel in Fernie owned by a man called Kishida. The article writes, "After devoting herself to life in sex trade to take care of her husband's gambling expense and his imprisonment, she passed away. She would not be able to rest unless her husband's reformation is finally proven fruitful" (Osada, 15 March 1912). Upon some additional archival digging, I discovered a brief report of Kuni's death and funeral on the first page of *Tairiku Nippō* issued on November 16, 1911.

Kuni Matsuno's funeral

> The wife of Hyōsaku Matsuno, originally from Shiga Prefecture and currently working in Fernie, Kuni (35 year old), passed away on the 6th of this month due to delivery complications. Her funeral took place today at 2 pm at the Buddhist Temple in Vancouver in accordance with her will.
>
> (Tairiku Nippō, *16 November 1911)*

Kuni apparently chose to have her funeral to take place in the Buddhist Temple located right in *Paueru-gai,* or "Japantown" in Vancouver. This surprises me, because Osada (1910) writes elsewhere that women in sex trade tended to avoid the Japanese community out of shame. What did make her wish to choose Vancouver as the place for her memorial? I am also surprised to find the report of her funeral posted on the front page of the newspaper that condemns individuals involved in the sex trade (Yoshimizu, 2018). In fact, the announcement does not include any indication of Kuni's occupation and treats her just like another member of the community. But not every death in the Japanese migrant community gets to be announced in the same way. So why Kuni's death? I also wonder about her child. Did the child survive? Who was the father? What happened to Hyōsaku?

With further archival research, I was able to collect her medical certificate of death and death registration, which provided specific information, including the date and place of the death, the medical cause of her death (eclampsia and cerebral hemorrhage), and the name of the physician who treated her. The informant of the death registration is Hyōsaku and their relationship is indicated first as "lover," and then "husband," as added just below. Her religious denomination is Buddhism. Like many other Japanese migrants who died around the same time, Kuni's remains was buried in the segregated section for Japanese and Chinese migrants in the Mountain View Cemetery in Vancouver. The burial permit issued for Kuni further gives me information of the name of undertaker and the cost for the burial ($9 in total, including $3 for the "plot or lot" and $6 for "digging grave"). On

this document, her marriage status appears as "Single." Kuni and Hyōsaku may never have officially married.

In Japan from the second half of the nineteenth century through early twentieth century, women entered the sex trade—reluctantly, willingly, or unknowingly—through human trafficking systems. Often procurers purchased women from their family, who usually lived in poverty, or simply abducted them and sold them to brothel owners; the women's labor was exploited under indentures until the women finished paying off their imposed "debts" for the costs of traveling, housing, living, and work expenses (Morisaki, 1980; Oharazeki, 2016). Their ties to family could officially be severed at the time of entry into the trafficking system or severely harmed due to their involvement in stigmatized work. When women died due to illness or suicide, sometimes double suicide with their illicit lovers, or without descendants to perform proper posthumous rites, they become *muenbotoke* (spirits without family ties), which often have no family members to visit them in the afterlife (Nakamura, 1996; Kim, 2016; Rowe, 2011). Kuni was involved in the sex trade, presumably officially single, and died away from homeland. The Buddhist Temple might have had been the only place she could entrust with her spirit to be taken care of after the burial of her remains.

After some email correspondence with an assistant manager at the cemetery following my first attempt to locate Kuni's burial site and discovery of the rectangle depression on July 19, 2018, I was informed that I was mistaken about the location of Kuni's burial site. The depression I spotted belonged to a Japanese man who died over a decade before Kuni's death. I visited the cemetery next time on August 1, 2018, trying to spot the actual location of Kuni's grave.

While it was never intended, the timing of my visit fell near the Obon period in the mid-August when many Buddhist people in Japan or Japanese diaspora commemorate their ancestors. As I entered the cemetery, I was relieved by the cloudy sky as there is otherwise not much shade around. What a pleasant day for a cemetery visit. I recalled my visit to my ancestors' grave years ago in my mother's hometown in Fujinomiya, a city located at the bottom of the Mt. Fuji. *Why does the annual cemetery visit have to happen in the hottest time of the year?* In the mainland of Japan the sauna-like humidity makes my body completely malfunctional unless I am in an air-conditioned space. Ever since I was a child I had a problem of not being able to sweat properly, causing the heat being trapped within my skin. It often caused dizziness to the point where my body collapsed to the ground. The summer in Vancouver is dry. It is a precious time of the year when you can see the blue sky—"Enjoy the sun while you can!" is a phrase I have learned to say. The dazzling sunlight is indeed strong, however, hits and burns my skin and causes headache and the kind of sunspots on my face that my body never developed while I lived in Japan.

On a sunny day, I would be able to admire the sharp mountain lines in the north right from the Chinese and Japanese sections of the Mountain View Cemetery, which is located approximately 4 kilometers south of Vancouver's waterfront. I always look for the two peaks or what Osada calls *raion-dake* in his *Tairiku Nippō* article published in 1912, which is the Japanese translation of the Lions as white settlers called them. According to the story, the Squamish chief Joe Capilano shared with E. Pauline Johnson (Takwhionwake), which was initially published by Johnson in 1910 in *The Daily Province* (Johnson, 2013/14), the peaks are the two daughters of a great Tyee turned into immortal. They commemorate peace and friendship—but they have witnessed numerous events of colonial violence, dispossession, displacement, and deaths that have happened on the stolen Coast Salish lands. They have also

witnessed the burial of Kuni, although the view from the peaks may have been distracted by the clouds and rains if it was a typical November day of the west coast.

"To the northeast of the depression," I followed the instructions provided by the assistant manager. This time I encountered a complete absence of a marker. Probably she never had a marker erected for her, despite her funeral being announced on the first page of the community newspaper. I looked down on the plain ground with the grass that had been dried up by the direct sunlight. The air is too dry, indeed. I wondered if Kuni ever misses the humidity of her homeland. I prayed to her against the apparently empty ground. Absence of an embodiment of Kuni's spirit disorients the direction of my praying hands and body.

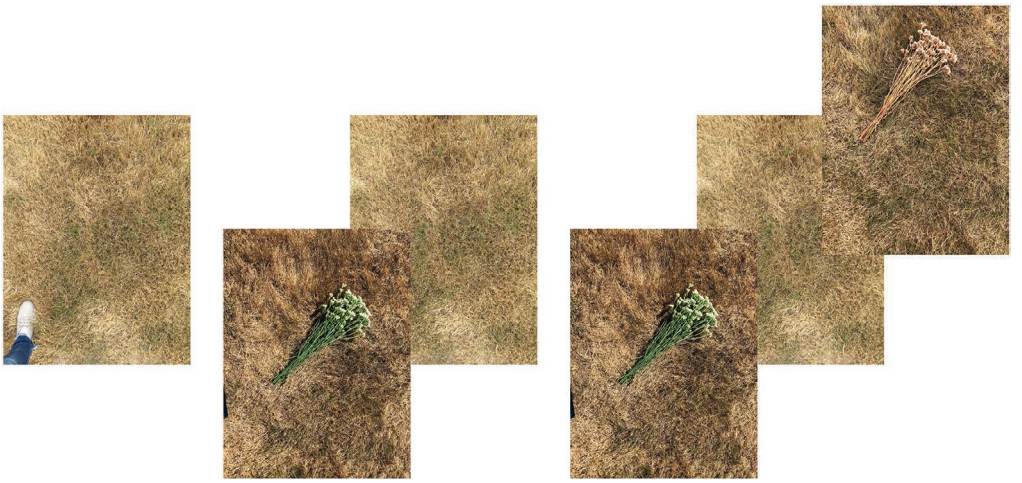

Figure 29.1 Kuni's grave, Mountain View Cemetery, "Vancouver," unceded lands of the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh (Squamish), and səlilwətaɬ (Tsleil-Waututh) Nations.

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Video 29.2 Unmemorial 02 (https://youtube.com/shorts/Y5hKiLdaMKc)August 18, 2021. Mia, my 10-year-old daughter, had fever over the weekend and has been missing her summer camp this week. Today, I finally took her to a COVID-19 testing site, although her fever had already been dropped, just for reassurance. Ironically, driving made her feel even sicker and I decided to stop by the Mountain View Cemetery on the way home so she could take a rest. I also wanted to introduce Mia to Kuni. The flowers I brought to Kuni a week ago were still lying on the ground. They have been browned, leaving no trace of water and barley tea that I poured on them. That was from a picnic I had with my friends by her grave. We put our palms together and pray.

> Hello, Kuni-san. Today, I brought my daughter. My grandfather's spirit might be here today, too. He died on December 17, 2020, during the pandemic in Fujinomiya, and I haven't been able to visit his grave and properly pray and offer incense to him, because of the travel restrictions. But he might have traveled all the way here. Grandpa, please meet Kuni-san, if you are here.

Mia starts asking me questions.

"Why did you put the flowers? Is there a grave there?"

"She doesn't have a marker, but she is buried underneath. I know that."

"So is that why you put the flowers there?"

"Yup."

"Why can't we build a grave?"

"Hmm, that's a good idea. What materials do you think we can use for it?"

"Maybe we can bring some piece of cardboard or wood, and we could write her name with like a Sharpie, and put it there. Like a thick square piece of wood."

"Okay, can you help me with that?"

"*Sure. But maybe not today.*"

Note

1 I use pseudonyms for those who are identified in the archival news articles as individuals involved in the sex trade. In this chapter, they include Kuni and Hyōsaku Matsunos, and Kishida.

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30

NON-REPRESENTATIONAL SENSORY ETHNOGRAPHY

Creation, attention, and correspondence

Phillip Vannini and April Vannini

In many English-speaking countries around the world, drivers and pedestrians are familiar with a rectangular road sign which reads ONE WAY in black letters set against a white background. The sign subject of the photograph above is the literal Italian equivalent, but its message, "*Senso unico*," is of greater interest to us. *Senso unico* translates literally in English as "only *sense*." This is because the English word "sense" is derived (in part) from the Latin word *sennus* (hence the Italian *senso*), which means not only what we in English word intend by "sense," but also what we mean by "reason," "direction," or "way." In this chapter, we are going to redirect, so to speak, sensory ethnography away from a *senso unico* road and toward a pluri-directional way and non-representational way.

Non-representational thinking has emerged over the last two decades as an amalgam of various post-foundationalist perspectives (for more see Simpson, 2021; Vannini, 2015a, 2015b). Non-representational methodologies are a diverse range of research strategies informed by a unique style and by creative approaches which lead to a rethinking of "the usefulness and purpose of empirical investigations" (Paterson, 2009, p. 779). Non-representational methodologies recognize that there is an immanent liveliness in the world which humans and non-humans enact and encounter through an active, vitalist, performative, and often habitual and pre-reflexive stance (Greenhough, 2010). As Dowling and colleagues have noted, non-representational methodologies thus often pay "attention to the non-visible, the non-verbal and the non-obvious," in order to "grasp and grapple with that which has, at times, been invisible, denigrated and unimaginable" (Dowling et al., 2018, p. 780).

Non-representational ethnography is a unique approach to ethnographic analysis and composition (see Vannini, 2015b, 2015c). Non-representational ethnographers are not interested in reporting back from the field through faithful captures of the world. Rather, they endeavor to generate ethnographic impressions that are creative, personal, and deeply skeptical of any claim to neutrality or reliability. Rather than reproducing a lifeworld through definitive descriptions and accurate interpretations, non-representational ethnographers produce accounts that are aware of their contingency, partiality, and situatedness. The emphasis on production, as opposed to reproduction, means that non-representational accounts do not intend to "capture" a particular subject, but instead strive to enliven or animate that

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Figure 30.1 "Senso unico." Photograph by Phillip Vannini.

subject in a generative, inventive way (see Dewsbury, 2010; Vannini, 2015b). This approach recognizes that life is dynamic, unpredictable, multiple, continuously unfolding, and therefore requiring an adaptive orientation to movement and knowledge-acquisition based on what Ingold (2011) has called "wayfaring." Rather than proceeding down a one-way direction, in their wayfaring practices non-representational ethnographies are "pulled and pushed by a sense of wonder and awe with a world that is forever escaping, and yet seductively demanding, our comprehension" (Vannini, 2015b, p. 320).

A *senso unico* approach to the research journey is easier and more predictable than a wayfaring approach. Whereas the former yields an answer to a research question, the latter yields more questions. Whereas the former yields data, the latter gives way to a world that is not given and already fully formed but one that is crescent (Ingold, 2022). And whereas the former yields interpretations, understandings, and explanations, the latter brings forth

reimaginations, transformations, and a multitude of audible silences, ungraspable textures, and invisible becomings. The multitude of paths revealed to the non-representational ethnographer is thus imaginative, based on creation, attention, and correspondence.

To illustrate these characteristics, in what follows, we will be drawing reflections and examples from an ethnographic project we recently completed on the topic of wildness and natural heritage. The multi-site fieldwork project in question was carried out between 2014 and 2020 in the Galapagos Islands, Patagonia, Belize, Iceland, South Tyrol, the Ogasawara Islands, Tasmania, New Zealand, Thailand, and ten UNESCO World Natural Heritage sites in Canada. The fieldwork eventually resulted in two books, one titled *Inhabited* (Vannini & Vannini, 2021) and one titled *In the name of wild* (Vannini & Vannini, 2022a), as well as two feature-length documentary films by the same titles (Vannini & Vannini, 2021, 2022b). Whereas the book and film titled *Inhabited* focus exclusively on our Canadian fieldwork, the book and film titled *In the Name of Wild* focused on the project as a whole. Though there are differences between them, both books and both films are inspired by the principles of a non-representational sensory ethnography, starting first and foremost with their emphasis on a generative imagination (more on this soon).

What is non-representational sensory ethnography?

Before we move much further, we should be clear on something: non-representational sensory ethnography is not really an "official thing." Let's be honest; books like this one, and chapters like ours in particular, always run the risk of reifying the research strategies they describe. This results in concretizing and even in branding methodological styles. Here, we should be clear, it is not our intention to create a canon, a recipe, or a how-to manual to non-representational sensory ethnography. Just like sensory ethnography is pretty much a loose style of ethnography, non-representational sensory ethnography is simply a style of sensory ethnography. Some sensory ethnographies will have subtle non-representational qualities, some will have more intense characteristics, and some will be more and some less explicitly non-representational. The point here is not to create a category or argue that one style is better than the other. Having said this, let us now introduce in detail what we are talking about.

Non-representational ethnographies "emphasize the fleeting, viscous, lively, embodied, material, more-than-human, precognitive, non-discursive dimensions of spatially and temporally complex lifeworlds" (Vannini, 2015c, p. 318). An essential impetus behind these kinds of ethnography is the resolve to tackle methodological timidity (see Latham, 2003), epitomized in particular by interview data neatly packaged up in illustrative quotes (Thrift, 2003). This doesn't mean abandoning the methods ethnographers typically favor. Instead, together with Latham (2003, p. 1903), we believe that "we should work through how we can imbue traditional research methodologies with a sense of the creative." Vitality, performativity, mobility, corporeality, and sensuality are some of the distinctive stylistic qualities that non-representational ethnographies have imbued traditional ethnographic methodologies with (Vannini, 2015c). But what exactly is unique about non-representational sensory ethnography, as opposed to a non-representational ethnography? To answer this question, we need to return to the starting point of this chapter.

Representational research studies, even some ethnographies, typically move in a *senso unico*—a one way. There is nothing essentially wrong with that approach. That is, there is nothing wrong with asking what something means, or in investigating how meanings

of various sensations are socially constructed, or in deconstructing how distinct senses are molded to operate in certain ways in light of a particular sensorium, or in analyzing discrete experiences as reflections of broader historical and social discourses. However, these are not the directions we, as non-representational sensory ethnographers, have taken. This is because as non-representational sensory ethnographers we prefer not to start our inquiries "on the fixed" and the "already completed" (Simpson, 2021, p. 52) which awaits to be analyzed and deconstructed, but instead on "the lived present as an open-ended generative process" (Harrison, 2000, p. 499). As non-representational sensory ethnographers we focus on "something that is generative of difference and not the re-presentation of the same, fixed, finished thing" (Simpson, 2021, p. 21; see also Doel, 2010).

To deepen our argument, let us turn to the work of Tim Ingold, whose latest writings on imagination, attention, creation, and correspondence have been collected in a recent book titled *Imagining for real* (Ingold, 2022). In that book Ingold writes about how scientists typically set out on their research projects by mapping out a "terra incognita that is ready made—that is to discover, through some process of decoding or deciphering, what exists already in fact and in toto" (2022, p. 72). In fact, ever since the publication of Galileo and Bacon's ideas, scientific enquiry requires empirical researchers to *describe* (from the Latin word for writing down, sketching, copying, and representing) what they experience, observe, and/or experiment (these being the denotations of the Latin *empiricus*, the etymology of empirical). To describe, Ingold argues,

> is to obtain knowledge not by reading out but by reading off. It entails a shift, as Candler (2006, p. 10) puts it, "from a story told and performed (with the whole of its body) to a text seen and interpreted." And from the moment when the former gave way to the latter, the world ceased to offer counsel or advice and became instead a repository of data that, in themselves, afforded no guidance on what should be done with them. The facts are one thing, values quite another, and the latter had their source not in nature but in human society. Thenceforth, wisdom took second place to information.

Hence, the idea of "data" was eventually born. To such a way of doing science all information is a *datum*, that is, a given. Just like reading off a road sign and abiding what it commands, the one-way scientist simply has to follow a given direction to arrive at a set destination. But, as Ingold (2022, p. 75) writes,

> the world does not ostensibly give of itself to science as part of any offering or commitment. What is "given," in science, is that which has fallen out of circulation and has settled as a kind of residue, cast off from the give and take of life. It is this residue—dredged, sampled and purified—that is then subjected to a process of analysis, the end-results of which appear on the written page in the forms of words, figures and diagrams.

Now, how could we change this? How could we back out of the one-way street in which the scientific model of empirical data collection and analysis has channeled methodologically timid research? The answer to this question, for us, entails taking a non-representational turn which goes beyond description and beyond interpretation. The basis for this turn lies in exploring the potential of imagination. With Ingold, by "imagining" we do not mean fabricating or making things up. It is regrettable that imagination is often understood to be the

antinomy of perception and thus whereas to perceive is to feel and sense the real, to imagine it is to abandon the real by surrendering to fantasy. What Ingold calls "imagining for real" is something quite different. To imagine for real means abandoning the binary opposition of imagination vs. perception. In his words:

> A more generous understanding of reality would admit to a world that is not already precipitated out, into fixed and final objects, but launched in ever-flowing currents of formation; a more generous understanding of imagination would allow it continually to overspill the limits of conceptualisation and representation, into unmapped realms of conscience and feeling. By imagining for real, then, I don't mean the suspension of disbelief, an excursion into the land of "what if," or the artifice of taking an interior mental model or world picture for a putative exterior world that may or may not exist in fact. I refer, rather, to a way of entering from the inside into the generative currents of the world itself, by balancing one's very being on the cusp of its emergence.
>
> *(Ingold, 2022, p. 4)*

In this sense "imagining for real" is not equivalent to conjuring up or fantasizing something, but is rather an epistemological disposition based on opening oneself up "into the fullness of the real, in both its temporal incipience and experiential depth . . . a way of honouring the world, and of offering something in return for the gift of existence" (Ingold, 2022, p. xii).

Ingold's (2022) book on imagining for real is not focused on ethnography, let alone on methodology, and so our reading of his philosophical ideas here is very much imaginative and regenerative, so to speak. Many of the ideas, examples, observations, and experiences Ingold relates in his recent book pertain to art and science, and only rarely does he venture into a terrain that a casual reader might recognize as "practical" in a methodological or ethnographic sense. So, in reading his reflections and applying them to the practice of ethnographic fieldwork we are taking a few creative licenses. Yet these are licenses that seem warranted. For example, Ingold (2022, p. xii) writes that over the years he has become "outraged" by protocols of scholarly research that "define our relation to the world on the basis of taking rather than giving, extraction rather than reverence." In the style of zombie ethnography (see Chapter 30, this volume) this kind of research hungrily sucks data out of the world, then drains the world of its vitality by putting out "so-called 'knowledge products' for human consumption" (p. xii).

In contrast to that approach, we see value in a sensory ethnography that goes beyond representation by coupling the act of perceiving with the act of imagining. The non-representational value of such a practice lies in the fact that in imagining for real the world is not written down, interpreted, and represented, but instead generated, brought forth, and called into being. This is therefore a kind of ethnography that doesn't rely on "givens" and that doesn't proceed by way of taking, but rather proceeds by taking part in the world's ongoing formation of itself and in giving back a little. Like art, this kind of non-representational sensory ethnography "does not reproduce the visible but makes visible" (Klee, 1961, p. 76). Like an artist, a non-representational ethnographer thus can form things into existence by folding imagination into perception.

Writers before us have explored the potential for an "imaginative ethnography," some of whom (e.g., Denielle Elliott and Cristina Moretti) are also contributors to this book. Yet by

folding imagination and perception together we mean something different than what the proponents of imaginative ethnography do (cf. Elliott & Culhane, 2016). In fact, we want to depart from "imaginative" as an adjective, and in agreement with Ingold we especially want to be careful about embracing the value of so-called creativity. More than creative or imaginative, the kind of non-representational ethnography we are calling for is participatory: it is a way of taking part "in a world that is itself crescent, always in formation . . . [and] to participate from within, through perception and action, in the very becoming of things" (Ingold, 2022, p. 32). Just like the practice of participant observation itself, the kind of participation we are calling for is first and foremost a relation that relies on deep ties—with both humans and non-humans—that entangle ethnographers and their teachers together in the crescence of the lifeworld. This is a kind of participation that, echoing Manning's (2009, p. 69) words, flies ahead of things to disclose the present in its emergence. There are three aspects of this which we want to highlight: creation, attention, and correspondence.

Creation

Qualitative research courses teach students to begin their project on the basis of a research inquiry that is typically formulated as a "how" or "what" question. Asking questions that begin with "how" or "what" underscores the open-ended nature of qualitative inquiry and is a way of differentiating qualitative from quantitative research and its hypothesis-testing procedures. A brief Google search on qualitative research questions yielded the following examples of research questions (DeCarlo, 2018, n.p.):

- How do people who witness domestic violence understand how it affects their current relationships?
- What is the experience of identifying as LGBTQ in the foster care system?
- What does racial ambivalence mean to residents of an urban neighborhood with high income inequality?
- How do African Americans experience seeking help for mental health concerns?

Very few readers, if any, will find anything "wrong" with any of the above. And neither do we. But these are kinds of questions we wish to go beyond. Why? Because these kinds of questions drive researchers to describe a subject, that is, to write it down, to present it, to sketch it, and ultimately to represent it. Take the question pertaining the experience of identifying as LGBTQ in the foster care system. The question asks a researcher to find those experiences—which are presumed to be there—take the data, synthesize the data is a way that is faithful to "the" experience, and represent the data in a valid copy that is faithful to the original. In essence, "the" subject matter is simply there and the researcher simply needs to apprehend it and mimic it by way of description and theoretical interpretation. This is a simple set of directions with no time for de-tours. It's like driving down a one-way road.

In contrast, we encourage non-representational sensory ethnographers to meander off the *senso unico* by asking "What else" and "how else" types of questions. This wandering strategy is simple: rather than identifying "the" subject matter and following "the" directions that such questions lead to, these kinds of questions open up the possibility of knowledge being and becoming otherwise, something imaginative and unplanned. In setting off on our own research, for example, rather than inquiring "what does wildness mean?" or "how do people

experience wildness?" we asked "what else can wildness be?" As we explained in *Inhabited* (Vannini & Vannini, 2021, pp. 15–16)*:*

> It is upon acts of noticing—based on our "modest witnessing" (Haraway, 1997, p. 269) of multiple relations—that our analysis and arguments are built. We do not take the typical qualitative approach of drawing out common themes and categories from the data and providing short representative tokens of those types by ensuring to cover as many interviews as possible in order to (quantitatively) support our argument. Instead, in a more-than-representational fashion we write about not so much what was typical and recurrent in the data but instead what fragments of our encounters generated new ideas for us, affected us more intensely, and activated new imaginings for us. [. . . T]he persistence of notions such as natural heritage as something opposed to cultural heritage (as promoted for instance by UNESCO) and of popular representations that still portray much of Canada as a wilderness demand that we continue to generate counter-narratives to received colonial ideas, especially when these counter-hegemonic moves are prompted by the ideas, experiences, and perspectives of people other than academics. . . . Ours is a logic built on singularities, not generalities; it is an analytic of impersonal individuation instead of personal and collective representation. Rather than build on abstraction and generalization, our analysis is driven by the infinite capacity that a multiplicity of relations have for generating new ideas and for making our world more, not less, complex (Greenhough, 2010; Hinchliffe, 2010). This is an open, partial analytic based on *and*, rather than *is*: a collection of radical ideas, lessons, arguments, epiphanies, and transformative events generated throughout our encounters, and thus ultimately a collection not meant to be judged for how it resembles a sample or a population, but rather to be valued for what it does next, what it generates and activates, and how it invents "new relations between thought and life."
>
> *(Thrift, 2004, p. 82)*

We believe that "what else" or "how else" research questions force us to focus on the *conjunctions* of knowledge, the places where things join together, instead of the places where knowledge turns into a one-way direction toward a definitive answer. Conjunctions are the places where new experiences, unexpected sensations occur and open up alternative worlds, places where "random lines can be thrown out from a form of life, a swerve occurs" (Harrison, 2000, p. 512). In our case, by asking what else wildness could be, we disrupted common understandings of that idea and challenged our readers and viewers to rethink their notions. This is how non-representational research works: not by way of replication, deconstruction, and synthesis, but by way of disruption. This is because, in Harrison's (2000, p. 498) words, "in the everyday enactment of the world there is always immanent potential for new possibilities of life, which may open new spaces of action."

Ingold (2022) uses the concept of *creation* to highlight this conjunctive potential of knowledge acquisition and generation. Rather than "creativity" his use of the word "creation" aims to highlight how we get to know creation from the inside. Creation, unlike creativity, does not draw attention to the external conditions of production and realization of an image already conceived in the mind "but harbours its own impulse of growth and renewal," and like the lifeworld itself is crescent rather than already pre-formed and created (Ingold, 2022, p. 5). Creation is not synonymous with invention. For our ethnography we traveled to 20 different sites around the world and listened to the stories, experiences, and

perspective of over 300 people over a period of five years. We did not invent anything. For us creation meant, among other things, turning to the knowledge that was shared with us as a way of finding new questions, new inquiries about the paths that the world itself had opened. Instead of finding an answer, a solution, a universal definition, in the end our fieldwork simply enabled us to ask questions that we never thought of asking before our first journey.

Like Ingold, Deleuze notably emphasized the importance of an anti-foundational way of thinking based on multiplicity and the potential of creation. The search for a univocal identity, for sameness, for coherent synthesis, for comprehensive definitions, for syntheses that are consistent across situations, for generic social processes and the like—in short for a *senso unico*—tends to hide difference, crescence, and the immanent potential for change. A focus on creation is instead open to multiplicity, to a way of learning about the lifeworld that embraces the value of "making anew, amalgamating, acting and reacting with others and with things" (Dewsbury, 2000, p. 477). This is a way of knowing that amounts to "an experimentation in contact with the real" (Deleuze & Guattari, 2004, p. 13).

Creation is not fabrication. Creation is a response to the world, a participation (not unlike the process of doing participant observation) in the "continual elaboration of the absolutely new" (Bergson, 1922, p. 11). Creation for Ingold is not the outcome of a mental representation or the work of the creative mind, but something that belongs to the world, "the wellspring of existence itself, bringing forth new life and time" (Ingold, 2022, p. 24).

Attention

As ethnographers we are accustomed to going where the action is, to observing everything that's going on, and taking note of even seemingly irrelevant details. Sitting on a bench in a public square, for example, a sensory ethnographer might take note of how the sounds of a weekly market and the smells coming from food vendors' stalls might shape the atmosphere of a place. But throughout our fieldwork for us the "action" wasn't always so obvious. There were times when, deep in the bush, our aloneness was intense, with no sights or sounds of other people for miles, and nothing but the currents of the winds and the movements of the clouds unfolded around us. As non-representational researchers we are interested in "events" (see Simpson, 2021), but what events were exactly unfolding before us, at first, wasn't quite obvious. Then we realized something very important.

Deleuzian philosophy underscores the power of infinitesimal relations and connections that take place beyond the surface, relations that entangle together humans and non-humans, the animate and inanimate, the live and the sentient with the seemingly un-alive and non-sentient. We also remembered the words of Dewsbury (2000, p. 476) who, following Deleuze, prompted non-representational scholars to ask "what something does, and how in its doing, or being thus, it connects with other things, digresses boundaries instigating new ones, whilst rejecting, separating, and recomposing others." And so we learned that these were the events that demanded our attention after all. Among one of these events was the sound of a foghorn. We cannot reproduce the entire passage from *Inhabited* here, but we want to provide you with an excerpt and then we will share our reflection and offer a practical suggestion.

> It's July, but summer is enveloped in white, dense moisture. Solitary flowers growing out of silvery ponds stare at their still reflections in the glassy water, looking slumberous,

> desaturated of colour and vibrance. Even the peat around us seems to have lost its green to the white of the air. Only distant waves and seagulls are patently awake—their sounds reverberating the few signs of sensible life in the turbid white darkness. Wildness isn't supposed to be like this. Wildness roars. Wildness startles. Wildness enlivens everything around it, striking a lifeworld with its vitalist power. Wildness isn't supposed to put you to sleep. It isn't meant to blind you to the lifeworld. Wildness doesn't speak through deafening foghorn thuds, toots, and pings. And yet.
>
> Tony took us out to Long Beach for a walk yesterday. It was a day like this. It was us, him, the waves, and the seagulls. He told us that Mistaken Point got its name from a navigational error. You can guess what caused it. In the fog, he pointed out to the seas, as angry yesterday as they are today. He recounted stories of mariners who never returned, lifeless bodies that have never been found, swallowed by the waters of both sea and air. It's foggy nearly two days out of three here, he told us. "But I don't mind," he said. "You get used to it, like everything else."
>
> Tony told us about the creatures that dwell in these verdant tundras. He told us stories of fairies who play tricks on those who live here. He told us about a woman who was surrounded by strange children out on a field. He told us that they were no one's children. He told us many stories like that. And then there are the stories of shipwrecks. The stories of lost souls who still inhabit these cold waters, waiting to be recovered, waiting to be remembered.
>
> And then there are the stories of fossils. The stories of petrified fish who still inhabit these cold rocks waiting to be recognized, waiting to be remembered. They, too, are in the fog, together with the seafarers on the lookout for more mistaken points, together with the cries of seagulls and the laments of fog horns. But you won't see them in the absence of colour. Just like you won't see the fairies, the extinct fish, or the human lives shattered by the sea. You won't see them, but you will know that they can live on a blank page.
>
> Fog's wildness lives in its vital energy to make you daydream. It's a soporific vitality, drenched in a humid torpor. A blinding vitality that will frighten you because of what you can't see and because of what you think you see. A still vitality that will invite you to move about, only to step closer to a cliff's edge. Fog's wildness isn't ferocious, sublime, or revealing of worldly ecologies; it's trickster-like, haunting, pregnant with other-worldly possibilities. . . . It's as if it wanted to tell us that it, itself, does not matter. What matters, it want[s] to say, is . . . what we can imagine within it.
>
> (Vannini & Vannini, 2021, pp. 70–72)

As sensory ethnographers we are trained to attune ourselves to the sensible. We note whatever we (and co-present others) see, hear, touch, taste, smell, and so on. But what we perceive is not just about what is immediately present. What we imagine for real also deeply matters. Therefore, rather than basing our "data collection" on the question "what do we feel?," as sensory non-representational ethnographers we need to attune our attention to "what else can be felt?" Doing so will reveal how the lifeworld is crescent, always becoming, always entangled with connections and relations. When we ask ourselves "what else can we feel," our attention becomes attuned to what we can imagine for real.

Paying attention, Ingold (2022) notes, is simply about going along with things, opening up to them, and orienting ourselves to the paths they open before us. This is different from "collecting data." What was "given" that morning at Mistaken Point, what was visible for our

data collection, was very little, indeed all contained within no more than a few feet of visibility. But *senso unico* data collectors are often disenchanted in the way they orient themselves to the sensible. Unlike data collectors, non-representational sensory ethnographers know they inhabit a world in which all inhabitants—from stones to departed souls, from animals to water molecules suspended in the air—follow paths that conjoin them together. Theirs "is a world not of objects but of affects," notes Ingold (2022, p. 128). Because of their capacity to be affected—not just to be the recorders of objective stimuli—non-representational sensory ethnographers are not afraid to be enchanted: "not to stand in awe before the congealed monuments of either nature or art, but to join with things, or accompany them, in the movements of their formation" (Ingold, 2022, p. 128).

When we ask "what else can we feel?" we draw attention to two different folds of attention. The first fold is a familiar one; it is the perceptual attunement of the keen and observing ethnographer. This is the fold that gathers knowledge about a lifeworld and attunes to it. The second fold is less familiar and goes beyond representation. This is a fold of exposure to a lifeworld that is unsettled and yet-unrevealed, a fold where a different kind of attention is involved. To attend is to wait (in French to wait is *attendre*) and thus to patiently "submit to the befalling of things" (Ingold, 2022, p. 6). By waiting we allow things to "speak" to us in their own languages, to reveal themselves to us through our memories, to show their relations and connections. By waiting we educate ourselves to how else we may feel and what else might be felt.

From a non-representational sensory perspective, attention—combined with the impulses of creation and correspondence—allows us to imagine for real. In doing so we can take further distance from the one-way direction of conventional research. In paying attention to the otherwise we open ourselves to the powers of heterogeneity. Thus, we become attuned to difference, change, variance, contestation, as well as the unfolding of alternative pasts, presents, and future (se Dewsbury, 2000; Simpson, 2021). In paying attention to the otherwise, we also become attuned to the potential of rupture: the power of the unexpected, the vitality of the unexplained, the revelation of the insensible and the non-sensical.

Correspondence

As articulated in the introduction to this volume, sensory ethnography research is said to be through the senses, about the senses, and for the senses. But *whose* senses? The answer, in the majority of the cases, is other scholars' senses. In fact, for the most part sensory ethnography is intended as an area of scholarly studies which is published in peer-reviewed journals unavailable to the public, or perhaps in rather expensive monographs printed by academic presses which have no real interest in marketing to the general public. This is symptomatic of yet another way in which research about the senses runs the risk of going into one-way directions: "regular" people give data to researchers; researchers take the data and see through the data with their theory; researchers then write down their descriptions and interpretations for other scholars without giving back to those whose data they have taken. The problem with this—if one agrees that there is a problem—lies within the attitude many of us scholars have toward people's ability to make sense of their experiences.

To exemplify this attitude, let us take the example of a study Phillip conducted in 2004 on artificial tanning (Vannini & McCright, 2004). Informed by symbolic interactionism and social constructionism, the study drew from interviews to look at the practice of bronzing one's body with tanning lamps. Data were interpreted in a conventional way based on the

notion—however veiled it might have been presented—that sometimes people really don't have a clue about the social and cultural significance of their actions. Thus, data were taken from people to make an argument about their tanned skin as an enactment of certain discursive forces. People's skin, looks, and practices were thus interpreted to be a representation of deeper cultural dynamics which they neither understood nor—because the article was published in a scholarly journal—were given a chance to understand. In sum, people gave data to Phillip, who took the data and the understanding of such data away from such people, only to give the data to other academic readers. This is how science often takes place: in one-way directions based on taking and never giving back. Now, how can this be changed?

The starting point, we believe, is to change the way we as non-representational sensory ethnographers relate to "regular people." As Thrift (2004, p. 81) says, non-representational scholarship "is an attempt to change the role of academics by questioning what counts as expertise and who has that expertise." Following this belief, throughout our recent project on wildness, the two of us treated everyone we met not as data providers but as teachers. This resulted in us rethinking our research as a co-production with our teachers through which we learned to listen differently and "became engaged in remaking the world through the process of [our] encounters" (Greenhough, 2010, p. 48). And in practical matters this meant two things: our process of making sense of the world (what one might call "interpretation") changed dramatically, and so did the way we told our stories (what one might call "representation."). Both these processes can best be understood through what Ingold calls "correspondence."

In *Imagining for Real*, Ingold (2022) writes about how he wants to establish "the possibility of a form of scholarship that sets out neither to understand the world around us, nor to interpret what goes on there, but rather to correspond with its constituents" (p. 243). Rather than one-way interactions, the idea of correspondence highlights the dialogues that one has with the world, both its human and non-human inhabitants. Correspondence, just like the familiar process of epistolary correspondence, is a process whereby things respond to one another in a back and forth that shapes all those who take part in it. So, whereas conventional data collection and interpretation relies on relations of exteriority (researchers and research subjects being outsiders to each other operating with different frames of mind), correspondence relies on relations of interiority whereby ethnographers and their teachers, as well as their stories and ideas, fold together in a back-and-forth of mutual teaching and learning. In corresponding with others, including the materials with which an ethnographer works, we join them. We do not interpret them or explain them; we simply join them. This way of telling "abhors explication," writes Ingold (2022, p. 234), it

> sets down nothing in advance, nor does it project a future outcome in the present. What it does do is offer an itinerary, a path to follow, along which one can keep on going. This is about feeling forward, about anticipation rather than prediction, in a circuit of attention and response.

Phillip's study on artificial tanners was informed by constructivism. Constructivism has informed much of the language and many of the procedures of qualitative research taught and learned across the social sciences. One does not have to be a constructivist, in other words, to operate like one. To "interpret" data, for example, often relies on the constructivist principle that data are encoded through cultural frames that must be deconstructed by the researcher in order to generate understandings, explanations, and ultimately conclusions.

Thus, the researcher operates by decoding representations (data) and encoding them into language and theoretical frames that other researchers understand.

Non-representational thinking aims to move beyond constructivism (Simpson, 2021). Rather than interpreting data, corresponding with the world allows non-representational sensory ethnographers to not explain or conclude about things, but to see into them, in a world where things are "not preordained but incipient, forever on the verge of the actual" (Ingold, 2011, p. 69). In this sense, correspondence does not take a researcher down a one-way street leading to a conclusion, but rather opens up a multiplicity of paths and encounters that allow knowledge to grow and transform in unexpected and disorderly ways.

So, what did all of this mean for us as students of wildness? At the very least, two things. First, rather than treating our "research subjects" as givers of data needing to be decoded, we did our best to honor our teachers by learning from their lessons they shared with us. Another way of saying this is that we treated our research participants as if they were theorists, as if they were—and indeed are—scholars. An excerpt from *In the Name of Wild* (Vannini & Vannini, 2022a), detailing an encounter we had at the early stages of our fieldwork, will exemplify this:

> Mary Jane [is] a member of the Lhù' ààn Mân Ku Dań (Kluane Lake people), also known as the Kluane First Nation, the traditional inhabitants of Ä́sía Keyi (Grandfather's Country), an area that envelops the shores of Kluane Lake and the Ruby and Nisling Mountain Ranges to the northeast and the Saint Elias Mountains to the southwest. Residing mostly in and around the small community of Burwash Landing, most members of the Kluane First Nation identify as descendants of the Southern Tutchone. Two Clans, the Khanjet (Crow Clan) and Ägunda (Wolf Clan), make up the nation's dominant matriarchal moiety system, though other members of the Kluane have other origins, such as Tlingit, Upper Tanana, and Northern Tutchone.
>
> "Holy mackerel," Mary-Jane Johnson exploded and nearly jumped out of her seat when we asked her whether Kluane National Park was a wilderness. "It's a good thing my uncle is not alive to tell you something different. He'd say, 'Where the heck do you get this word "wilderness"?' He'd say, 'There is not one place in this world that has not been touched by a human at some point or another.'"
>
> Mary-Jane paused. We were silent. She wasn't angry, but she had a lesson to teach us.
>
> "My family is from all of this area that you're talking about, down from Fort Selkirk, all throughout this country, down through to Alsek, down in the coast toward Haines, Alaska, and over through to Skagway." Not too long ago, she continued, "We were way the heck back up on the glacier, and then they found a bear hide, a grizzly bear hide, way back up there, and it would take you a full day of skiing up over on top of the icefields to get there, and they found a bear hide, and it was human-modified because of the slits and the ties that were on there, and how in the heck it got up there on the glacier?" She paused, long enough for April to ask a big question.
>
> "So, is there a problem with the word 'wilderness'?"
>
> "When you say 'wilderness,' why are we excluded from that idea of wilderness? People are part of the wilderness; people are part of the land. My body does not survive day to day without being part of that land or without being part of that water. And find me one person on this earth who is not part of this land or part of that water where they live. And why are we putting ourselves outside of the idea of wilderness? 'Wilderness' is just a goofy word for somebody that lived in a concrete block for twenty years and

> came out and saw the wild leaves for the first time or a moose or a bear for the first time. No, we're not above this land and we're not below the water. We are part of it."

As it turned out, Mary-Jane's lessons informed the rest of our entire research. We should all listen to the wisdom of the world's inhabitants "rather than taking shelter in the closeted self-referentiality of philosophical discourse" (Ingold, 2022, p. 9).

Second, we wrote *In the Name of Wild* (Vannini & Vannini, 2022a) and produced our two documentary films *not* for academics, but for our teachers. To do this, we ruptured all kinds of scholarly conventions on writing and editing. Rejecting the notion of scholarly rigor in its various manifestations, which paralyzes everything living into a manifestation of something else (Ingold, 2020, pp. 12–13), we worked like amateurs: coloring our stories with care, curiosity, moral responsibility, passion, vitality, and affect (see Ingold, 2020). For example, we wrote our ethnography in the style of a travelogue. We gave our teenage daughter the opportunity to write in our book and narrate parts of our documentary film (Vannini & Vannini, 2022b). Then we opted to work with a trade press that edited our work unlike any scholarly press would have, printed an inexpensive book, distributed to physical bookstores, and promoted it with news and popular media. For our documentaries, we used extra-diegetic music, stylized imagery, and fast cutting. We distributed both films through popular SVOD platforms like Amazon Prime, Apple TV, Tubi, Plex, and so on. And following well-established practices for collaborative research our teachers had the opportunity to read and view our work and provide comments and feedback before it was made public. In short, rather than publish away from them, we published for them in order to continue our mutual learning, our correspondence.

The principle of correspondence hinges on a different way of knowing, writing, and thinking about the lifeworld, a way that does not rely on designing theories in the (researcher's) head and confronting them on the ground of data, but rather through an imaginative process in which ethnographers join forces with a crescent world (Ingold, 2020, 2022). Correspondence requires attention, and therefore requires ethnographers to wait. Those with the time to attune their attention, those with the care to be enchanted by the world's ongoing creation, will find corresponding with the world to be a process rich with ruptures, realizations, and unexpected lessons.

Correspondence also requires an important shift from ontology to ontogeny. As Ingold (2022, p. 8) argues, ontology drives our focus on how things exist, how they are, and what they are. Ontogeny, in contrast, is about growth and transformation. It's not about *is* but instead about *and*. It's about what else and how else: the endless generative potential of the more and the otherwise. This is an important shift because it points our attention away from things that closed to one another, headed for one direction, wrapped into its own worlds. And it directs instead our attention to worlds that are open, always-becoming, crescent, and impossible to channel down the *senso unico* of a single perspective. Correspondence carries on and is open-ended: "it aims for no fixed destination or final conclusion, for everything that might be said or done invites a follow-on" (Ingold, 2022, p. 11), a de-tour, the retracing of one's steps, an openness to wandering and wondering, and ultimately an entangled multiplicity of paths, ways of senses the world, and ways of sensing ahead with it.

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31

SENSING SCENES

Doing sensory ethnography in queer space and time

Kerryn Drysdale and Jan Filmer

In this chapter, we offer reflections on our respective research projects to consider how queer people, including us as researchers, proceed from and arrive at specific understandings of queerness in the research encounter. We suggest that sensory ethnography is both a methodological approach and an epistemological sensibility (see also Drysdale & Wong, 2020), allowing researchers to intervene in what is often taken for granted as queer. Importantly, ethnographies that attend to the senses involve the senses both as an object of study and as a means of inquiry. Both, as we show, may explain how scenes of everyday life are made sense of and are, in turn, generative of their own meanings. Here, we are specifically interested in intervening in taken-for-granted ideas of what queerness is, and in doing so, we highlight the complexity of where and when queer practices are enacted and enlivened.

This interest is not, then, simply a case of depiction (accurate or otherwise) of queer life. Rather, sensory ethnography is a methodology aligned to the premises of non-representational theory (Lorimer, 2005; Thrift, 2008) in its experimental and exploratory, enlivening and expressive, ethos. Non-representational theory is ultimately concerned with the movement of everyday life. These movements are inherently social because they derive from our culturally mediated perceptions that simultaneously shape our practices of being in the world. What non-representational theory teaches us as researchers is to consider how such perceptions are borne from a kind of relationality that is precarious, active and unforeseeable; that is, perceptions and practices that form our "objects of study" are produced in moments of relational movements that are at once generative of their own. If non-representational theory sees its activation in performative processes, then this also necessarily invites questions of methodology. What worlds do we, as researchers in moments of engagement with our participants, bring into being?

In "Sex in Public" (1998), Lauren Berlant and Michael Warner argue that heterosexual culture achieves its sense of normalcy through privatized notions of intimacy that are simultaneously public through its expansive institutionalization reaching into everyday life. Queer culture, in contrast, depends on its counterpublic characteristics; that is, specific and specialized queer spaces that facilitate and sustain sociality through their subordinate relation to heteronormativity:

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> Making a queer world has required the development of kinds of intimacy that bear no necessary relation to domestic space, to kinship, to the couple form, to property, or to the nation. These intimacies do bear a necessary relation to a counterpublic—an indefinitely accessible world conscious of its subordinate relation.
>
> *(Berlant & Warner, 1998, p. 558)*

Indeed, this type of visible queerness is necessary for culturally subordinate groups to develop a type of dense publicness required for sexual cultures to be recognized; such signs of queerness rely on forms of affective, erotic, and personal living that are public in the sense that they are sustained through collective practices. Berlant and Warner call the process of concretizing queer counterpublics "world-making", in that they require the witnessing of their intense personal affects to prompt feelings of belonging and transformation necessary for the flourishing of queer lives. The spectacle of "sex in public," in short, has come to stand in as proxy for queer life.

Over 20 years later, we find these same investments in queer recognizability evident in accounts of lived experiences and their representation. For example, in a short opinion piece published in the *The Guardian* in October 2020, Benjamin Riley recounts his experience of, and feelings during, the "Last Party" before the COVID-19 pandemic and social restrictions reached Australia. For Riley, queerness is "enacted and shared between people in queer spaces" prompting his provocation: "What does it mean to say that I'm queer, sitting alone in my house?" (Riley, 2020, n.p.). We reference this article here because Riley's recent reflections echo Berlant and Warner's influential account of queer culture as articulated "in mobile sites of drag, youth culture, music, dance, parades, flaunting, and cruising" (1998, p. 561). Like Riley, Berlant and Warner might also question how one can be queer when there is nothing overtly visible to indicate its presence. These are questions that reflect a tendency of queer scholarship to prioritize the novel and the unconventional, which, as Stevi Jackson (2008) observes, is characteristic of much work in the study of sexuality since the 1970s. We build on critiques like Jackson's by providing material examples of how a rhetoric of anti-normativity (Wiegman & Wilson, 2015) does not leave enough room for analyses of "the ongoing negotiation of everyday, mundane, conventional sexual lives [and] the ordinary day-to-day patterns of sexual relations through/in which most people live their lives" (Jackson, 2008, p. 34). As our reference to Berlant and Warner (and then Riley) shows, there is an expectation that queer counterpublics should be known as such, and that they rely on visible indicators of differentiation that mark them out *as* queer.

The domains of analysis at hand include not only the notion of party scenes but also more quotidian scenes of everyday sociocultural and domestic life—these are, we suggest, all scenes of queerness. These queer scenes and the places in which they occur are sometimes not *a priori* queer. By this we mean two things. First, that their queerness may not be universally acknowledged nor celebrated *as* queer; and second, that their queerness did not preexist the moment in which people's investment in practices are retrospectively rendered significant. Indeed, to assume a certain version of what queerness is in advance would necessarily limit how, and by whom, queer lives are perceived and made sense of, and consequently, how queer lives can be represented in the research that follows them.

Reflections on method

This chapter is structured by reflections of two ethnographic projects, both conducted at the University of Sydney. These projects explored the changing geography of queer lives (Filmer,

2020) and the lifecycle of queer social scenes (Drysdale, 2016a, 2019) in Sydney, Australia. While both projects looked to how queerness manifested through everyday movements in queer sociality, each focused on the different modalities by which queerness can be found: Jan's project was concerned with the spatiality of queer lives; Kerryn's project identified temporal shifts in its emergence and decline. Both projects were conducted independently by each author, but it is the subsequent process of collective reflection that forms the basis of this chapter.

In what follows, we draw on anecdotes from each of the methods used in the research projects (one-on-one interviews and focus groups respectively) to illustrate the significance of the senses in the study of queer lives. The commentary that is presented here was preceded by a slow-paced process whereby we each went back to our data and then, together, sought to find connections between both sets. First, we started with the individual imperative to look for queerness that was not directly or materially apparent at first glance, and second, using a sensory lens, we collectively identified heretofore contentious, contradictory, or hidden elements of what queerness might be or become. Throughout this process, we shared with each other our own anecdotes from the field, as well as anecdotes that participants in our respective research projects shared with us, so as to fully engage with the entangled theoretical and methodological imperatives of non-representational approaches. These became conversations of anecdotal exchange that took place over a number of months. Together, we have treated these anecdotes as, to quote Meaghan Morris (1988, p. 7), an "allegorical exposition of a model of the way the world can be said to be working." Anecdotes as method, according to Mike Michael (2012), are performative, in that they have affected the storyteller in ways that make events "anecdotalizable", linking the researcher and the researched through their co-production. As such, these anecdotes serve as a conduit into our roles as researchers, and into the lifeworlds of participants in our research.

Moreover, by developing a picture of scenes through concrete sensory details (Emerson et al., 2011) that are observed immediately or conjured retrospectively through recall, these anecdotes also sketch the material environments that we equally participated in, and shaped, as researchers. This is necessarily a model that took on meaning in hindsight as sensory ethnography demands a slower pace of realization. To us, this also made apparent the entangled relationship between fieldwork (in which data are collected) and writing (in which data are analyzed). Far from proceeding in a linear fashion from data collection to data analysis, sensory ethnographic attention to the wider context of research shows us that both tasks are enmeshed in the same process of making sense of queer scenes. This entanglement merits emphasis because it shows that, as Alison Rooke (2016) notes, ethnography requires a constant crossing between the "here" and "there" of research spaces, and between the past, present, and future of research time. For example, as researchers committed to the ethical and sensitive portrayal of queer lives, we found ourselves shifting from being in the field when we are thinking about what we are observing and its future translation into queer representation; likewise, when writing up research findings we consistently revisited the ethnographic past in the form of retrospective sensory recall. Rooke's rejection of the temporal and spatial dimensions of a normative version of ethnographic time as an *elsewhere* to analysis and writing implies that the experience of any scene is never entirely separate from the ethnographic process of rendering it legible (see also Drysdale, 2015, 2019). As such, queer scenes are performative in the sense that they are produced through the research process that seeks to elucidate them. Put another way, sensory ethnography allows us a generative role in sensing queer scenes. As we detail later, these performative elements of scenes exceed their

material dimensions, which, at times, challenges us to rethink what "queer scenes" are frequently assumed to be. We hope that in describing these anecdotes and their impact, we can model three ways in which sensory ethnography comes to matter in the enlivening process of engaging in queer scenes.

A note on stylistic convention: we have opted to use the collective "we" when referring to insights borne from this collective and iterative process and use the individual "I" when outlining the parameters of and reflections about our respective research projects that were conducted independently prior to this collaboration.

Fridge magnets

Our first anecdote is drawn from Jan's expectations and assumptions as a researcher about what a queer home might be, informed by ethnographic studies from the field of cultural and human geography that explore how gay men and lesbian women use their homes for "identity management" (Gorman-Murray, 2008). These studies particularly engage with materiality of the home; that is, the objects people display in their homes in order to affirm their identity as queer. Reducing queer homes to the visual medium, however, reduces our capacity as researchers to imagine more expansively what a queer home may be.

Geographers who have analyzed LGBTIQA+ experiences of residential spaces have argued that homes are predominantly conceived as heterosexualized spaces (Valentine, 1993). Similarly, other research on homes shows that housing is primarily designed, built, financed, and intended for nuclear families (Bell, 1991). It is not surprising, then, that geographies of home and sexuality tend to focus on alternative LGBTIQA+ experiences of domestic space in order to draw attention to these conventions and limits (Valentine et al., 2003). Despite these implicit avowals of LGBTIQA+ connections to home, David Eng (1997, p. 32) argues that "it would be a mistake to underestimate enduring queer affiliations to this concept."

Echoing those claims, Australian cultural geographer Andrew Gorman-Murray (2008) shows how the maintenance of domestic materiality functions to support and affirm sexual identities because various possessions embody different facets of the self. Hence, positioning objects within the home "embeds a 'whole' self within domestic space" (Gorman-Murray, 2008, p. 284). Similarly, Gavin Brown (2008, p. 1224) suggests that gay and lesbian subjects queer the materiality of the suburban home through the choice of objects that are displayed within the home, such as gay magazines, homoerotic art, photos of partners, or souvenirs from lesbian and gay events. It is by putting these recognizable and specialized possessions on display, he argues, that "gay and lesbian identity becomes integrated into the home space" (ibid.) Changes to domestic materiality, then, figure as a response to changes in one's sense of self.

As part of my (Jan's) research into the changing geography of queer lives in contemporary Sydney, I recruited research participants for one-on-one interviews, which I conducted in participants' homes. The first home I visited was located in a residential street in one of Sydney's inner western suburbs. Hemmed in by other family homes, the house I entered was home to a family of two fathers and their two children. The ethnographic encounter with one of the fathers entailed a short introduction, followed by a formal interview (including a mapping exercise), and then concluded by me taking photos of some of the objects displayed in the common rooms of the home. Among other things, I photographed their big silver refrigerator in the kitchen because I was drawn to the fridge magnets that adorned its front, which included colorful letters along with some animal magnets. The magnets were not

arranged to spell out anything meaningful but instead, seemed to be used to affix postcards, photos of a young child, and a family schedule to the fridge.

In her essay on the role of refrigerators in supporting daily practices of social reproduction, Helen Watkins (2006) notes that this usually unobtrusive appliance is commonly associated with the traditional responsibilities of women to care for, feed, and nourish the family. Beyond its function as an instrument for preserving food, the fridge—along with items like schedules, lists of chores and groceries, photographs, postcards, and Wi-Fi passwords—also facilitates the negotiation and management of family life. For me, this family's silver fridge, rendered colorful by letters and animals, prompted my own sensory experiences of domesticity; the magnets conjured a range of other related sensory signifiers, such as the smell of home-cooked food, the vibration of a washing machine's spin cycle, the ring tone typical of a landline phone, or the sound of arguments about chores and homework—all experiences I had associated with typical heterosexual contexts. Put another way, these magnets appeared to me to be signs of what I had assumed to be heteronormative everyday activities and practices.

Having entered the field with a notion of queer as kinds of intimacy that bear no necessary relation to heteronormativity (Berlant & Warner, 1998, p. 558), as well as my expectation of finding visual markers that clearly embed participants' queerness in their domestic spaces, this family's fridge magnets stood out to me as profoundly significant. At the time, I felt conflicted and was concerned that my fieldwork did not reflect my research aims of tracking queerness in domestic space. I was concerned not for the seeming banality of this home in and of itself, but that this ordinary scene of everyday domestic life was somehow not indicative of the queerness that I anticipated I would find. The longer I sat with my initial response to these fridge magnets (which I did not explore with the participants in that moment) the more I realized that magnets—as well as other domestic sounds, smells, and feelings—are not, of course, in and of themselves neither wholly heteronormative nor wholly queer. Beyond their practical function to affix various items to or decorate a refrigerator, fridge magnets are made to matter in a wide range of domestic scenes, including in the domestic lives of queer people.

What troubled me in interpreting the significance of my experience is that I could not materially locate queerness in the way I anticipated. Through the visual alone (here, a lack of specific queer visual markers), this domestic scene registered as heteronormative. What I came to realize and take more seriously once we applied a sensory ethnographic lens to this retrospective analysis, however, is the fact that fridge magnets (like other "normative" material objects commonly found in family homes) are not ontologically "straight" in the same way in which the domestic sounds and smells they immediately conjured up for me are. A sensory sensibility, in other words, invited a process of reflection on the taken-for-granted meanings we attach to everyday sensory experiences and associations. That queerness can be found in and is frequently assigned also to objects that may initially strike us as heteronormative is further exemplified by our next anecdote on queer spaces.

Bridal shop

This second model also draws on the same project that Jan conducted. Here, an anecdote told to Jan by one of the project's participants captures precisely our view that queerness may not necessarily exist before the significance of particular social practices render it so. In making this claim, we build on literature within the field of geographies of sexuality, which

has already revealed how heteronormative spaces can become momentarily queer through sensory experience and expression (see, e.g., Drysdale, 2018; Podmore, 2016). Specifically, this research has shown us that queer cultural practices may recast the presumed heteronormativity of everyday places as temporarily re-sexed and regendered.

Mentioned in passing in the above anecdote, in this section we now focus attention on a mapping exercise I conducted in each interview whereby I asked research participants to draw a map of the places in which their significant relationships are formed and sustained. This technique draws on prior visual methods employed in gay and queer studies (Brown, 2001; Provencher, 2007). In particular, the map drawn by one participant in response to this prompt (see Figure 31.1) provides a circular diagram which represents the

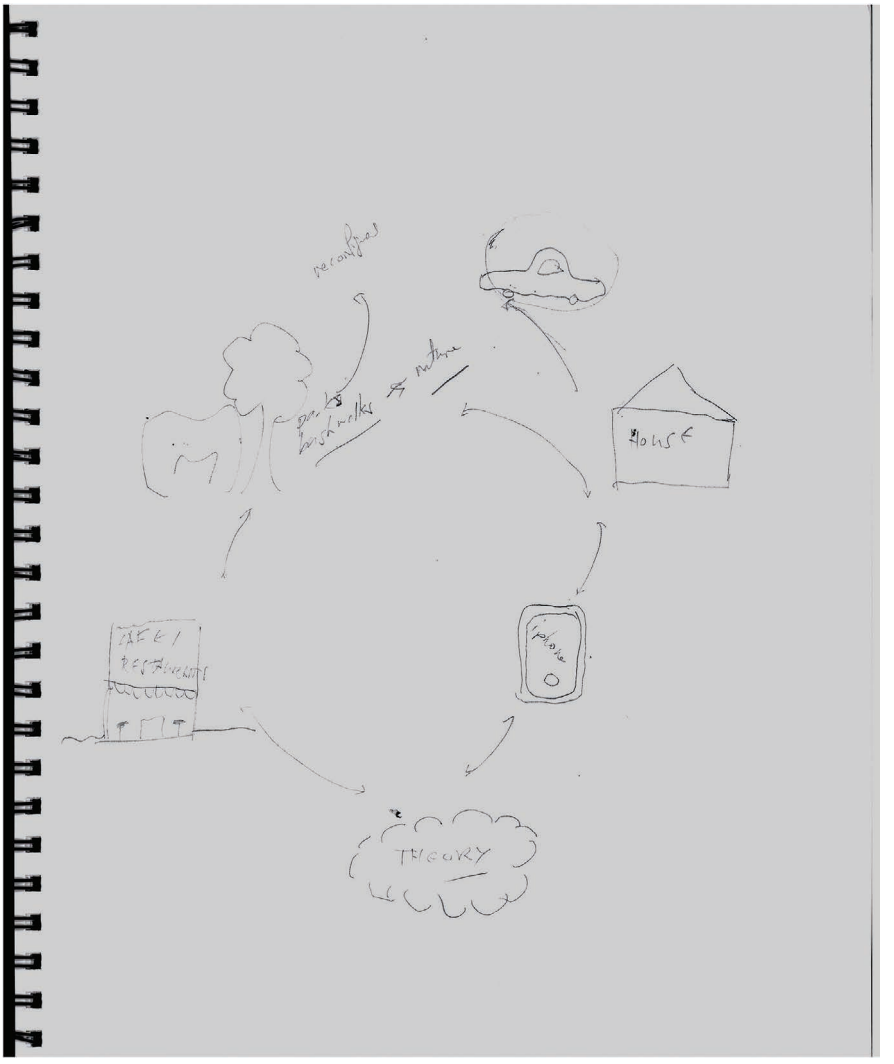

Figure 31.1 One participant's map of her queer geography.

interconnectedness of the different elements she chose to include—for instance, the rectangular figure of a building labeled "café/restaurant," and a table and a tree with "parks," "bushwalks," and "nature" mapped next to it. This participant also drew what she called a "generic house," which is where, she claimed, "my relationship would be." The interactions that take place in these spaces, this participant said, are all planned and mediated digitally, which she represented with a drawing of an iPhone. She then drew what resembles a cloud and labeled it "theory," and by way of explanation of its significance to her, said, "I love theory. It helps me make sense of the world."

This participant's love of theory was reflected throughout the interview during which she returned over and over again to the theoretical idea of "reconfiguring space." She proposed that "spaces are coded in particular ways," but "it's just the default [that] the whole world is straight, really, until someone says otherwise." This participant then reflected on what might happen to heteronormatively coded spaces when someone who is queer steps into them. By way of example, she referenced a series of bridal shops along a major historical highway linking Sydney's inner-city suburbs with its western suburbs. In this anecdote, told to me, she briefly sketched the image of a group of friends trying on dresses for a drag show, which may, on first hearing, be perceived to be mocking the proper function of such a shop. Reflecting on what this experience meant to her, she spoke of how her interest in queer theory intersects with, and provides context and rationale for, more mundane social practices that are part of her own spatial trespass:

> But then when someone who's queer then steps into that space, how does it change it? Like even say Parramatta Road—there's so many bridal places on Parramatta Road and they're just so straight, right? But then someone walks in who's, say, a guy who want to dress as a bride for an event or a woman who is gonna marry a woman and then all of a sudden that space—it doesn't even see itself as anything beyond straight—it can be reconfigured by the person there. And that's what I thought was really interesting. That the space might not change but it changes in terms of the relationship to the person within it.
>
> *(cited in Filmer, 2020, pp. 127–128)*

The notion of "reconfiguring" space has also been explored, for instance, by Elspeth Probyn (1995) in her analysis of a scene of two lesbians entering a straight bar. As they kiss in this masculine space, the bar changes from a homosocial to a differently gendered and sexed space. What felt stifling upon entry (based, for example, on unsoliticited comments or "masculine" smells) may become a space for queer possibility. This participant's anecdote shows how the otherwise unambiguous public space of the bridal shop was similarly inscribed as "queer" by "the relational movements of one lesbian body [and/or queer person] to another" (Probyn, 1995, p. 81). In the bridal shop, the taken-for-grantedness of marriage as heterosexual or gendered assumptions around who might wear a wedding dress for what kind of purpose are suspended by queer appropriation.

Although the many layers of sensory experience involved in stepping into a bridal shop along Parramatta Road are not made explicit in this recollection, the experience itself is, of course, rich in sensory aspects. And, in the moment of me as a researcher being invited to join in this recollection, this experience becomes layered with my own imagined sensory experience. The temporary queering of the bridal shop, in other words, is not just about what is visible (someone trying on a dress). Rather, this participant implicitly referenced a

range of sensory aspects through her anecdotal telling: we can imagine hearing the laughter of a group of queer friends, the disapproving gaze of the person working there, the smell of fabric and perfume, or the sound of cheesy classical music, all of which can take on new meaning. If queerness cannot be visibly identified, a sensory sensibility draws our attention to other myriad affective relations that circulate around the encounter, and in doing so, produce queerness in that moment. Yet, this is not a queerness manifesting as subversion or celebration per se. Rather, this is a more ordinary kind of queerness that necessarily challenges our expectations of it. Here, as the previous anecdote was also intended to show, the meaning of queerness might not necessarily overlap with the antinormative but may reside in more ordinary practices. And so now we move to examine a third model where the expectation of queerness manifestly produces queer space through sensorially based recall.

The Lesbian Bar

Our final anecdote centers on the somewhat mythical object of "The Lesbian Bar." A fruitful site for ethnographic exploration, the lesbian bar has long appealed as a place in which lesbian, bisexual, and queer women can congregate safely, cruise, and hook-up away from the discomforting gaze of heterosexual men. The bar has, in turn, attracted attendant scholarly interest in how lesbian cultures are generated *in* place (Drysdale et al., 2022). And while the lesbian bar has achieved solid bricks-and-mortar form in some parts of the world, its continued survival is commonly seen as perpetually under threat. The role of gentrification, coupled with the rising political ambivalence of claiming a non-heterosexual identity, may have influenced the ongoing viability and acceptability of sex-segregated spaces. Equally, the increasing economic instability of LGBTIQA+ commercial ventures has seen a number of formerly iconic bars, festivals, bookshops and other sites for lesbian and queer women close down (indeed, echoing Riley's concerns about the ongoing viability of queerness in the age of pandemics, see also Pepin-Neff et al., 2023). As such, there is a prevailing need to protect the (perceived) singular status of the lesbian bar. Initiatives like The Lesbian Bar Project (n.d.) seek to document and preserve such institutions (i.e., retain their visibility despite their precarity).

At the same time, research by geographers of sexuality has queried whether the lesbian bar was ever a stable, ontologically distinctive phenomenon that necessarily signals a recognizable lesbian cultural presence. Specifically, work into lesbian and queer women's spatial occupation has been contrasted with conventional gay male geographical territorialization, with recent research highlighting the existence of more mobile scenes that match women's patterns of social engagement (Drysdale, 2019; Nash & Gorman-Murray, 2015). This acknowledgment has spawned alternative methodologies that prompt closer attention to the more nuanced ways that patterned modes of social interaction move within and across myriad sites, rather than looking for visible indicators of their institutionalization.

For example, exploration of the centrality of the lesbian bar in lesbian urban lore by Jen Jack Gieseking (2016) reveals that the powerful pull of the bar anchors a lesbian imaginary that can push against countervailing pressures of gentrification and heterosexual assimilation. As such, the *idea* of the lesbian bar retains prominence as part of the geographical imaginary of urban sociality—even in the face of women's limited economic, social, and political power to occupy these spaces with any degree of permanency. This is to say, the social imaginary of the lesbian bar exceeds simplistic demands for either continued or emerging visibility—and it requires us to attune to its affective potential of what might have *become* lesbian place. In this

final model, we build on Kerryn's work on social scenes for lesbian and queer women that circulate around and beyond the physicality of the bar. Echoing our opening provocations, how do we recognize *a* bar as *the* lesbian bar in the absence of any visible indicators?

In my (Kerryn's) work on Sydney's drag king scene, my ethnographic exploration centered on The Sly Fox Hotel, a venue that hosted drag king performances every Wednesday night for over a decade between 2002 and 2012. With performances taking place late at night, making the trek from any number of hotels and bars that courted lesbian and queer women's patronage that night of the week to The Sly Fox Hotel approximately 500 meters away from the main entertainment street quickly became part of an established social itinerary. With drinking, dancing, and socializing taking place long after the last performance of the night, the success of the event also contributed to the perception of Wednesday night as the epicenter of lesbian social culture in Sydney. However, apart from its weekly hosting of drag performances, The Sly Fox Hotel contained no other visible cues that this was understood to be a lesbian bar: the owners and management did not promote the bar as LGBTIQA+ friendly in their advertisements nor did they show allied membership through aesthetics (no rainbow flags ever graced its walls!) Moreover, the ongoing feasibility of the night was always in a state of negotiation between event producers, performers, and venue management, despite its steady popularity. As such, The Sly Fox Hotel was a precarious sort of lesbian bar: it was the culmination of various modes of sensing lesbian space that facilitated a much more expansive imaginary of social life than the drag king performance events could ever materially provide, given the unstable conditions under which they operated. A socially attuned account of lesbian bar culture therefore requires a different methodological approach that seeks to identify other ways of sensing (and therefore knowing) scenes. This approach is necessarily intwined in the precepts of sensory ethnographic practice.

Using the insights provided by prior work on the social significance of the senses (Howes, 2021; Pink, 2015; Stoller, 2010), a line of questioning was put to research participants in a series of focus groups about sights, sounds, and smells as an oblique way of eliciting information about the sociality of space. Smell was by far the most recalled sensory experience in participants' accounts of The Sly Fox Hotel. These olfactory experiences included smells associated with the ill-maintained toilets, the prevalence of cigarette smoke outside the venue, and the sweat of performers and audience members inside it. However, it was the cumulative effect of spilled beer on the old carpets that established a distinctive sensory experience *as* lesbian:

> But, when you first walk in you think, okay, this is the Sly Fox, it's gonna be dirty, it's gonna smell like stale alcohol, smell like lesbians.
>
> *(cited in Drysdale, 2019, p. 146)*

Following this one participant's sensory evocation of the bar through smell, another participant in the same focus group remarked "Hey, it smelled like a party in there!" This sensory recall was then subject to a process of collective recognition based on a shared sensory experience (see also Drysdale, 2016b). In these combined statements, not only does the venue facilitate the maintenance of lesbian-centered relationships, it was understood to be literally permeated by the odors produced through the affective pull of being together. Through this process, The Sly Fox Hotel appeared to take on a lesbian character all of its own. The comment that The Sly Fox Hotel should "smell like lesbians," as it was related to me as a

researcher but also as a regular attendee, stands in for the long history of lesbian patronage at drag king events. But, it is one where this smell operates as proxy for the bar itself.

We find that senses are encoded not in material objects or texts but in the practices that surround their production and reception, often in unpredictable ways. And so, attempts to sense queer scenes require researchers to remain attentive to the senses, and the affects that circulate within and beyond them. In my work, I've called this a process of *intimate attunement*; that is, the process by which relations between experiences, bodies, and arrangements are animated within everyday encounters at the level of atmosphere (Drysdale, 2018, 2019). Here, the lesbian bar is animated in its sensed instantiation; it is felt, to paraphrase Kathleen Stewart's theorization of atmospheres, as "the direct materiality of people's shared senses" (Stewart, 2011). The condition of being together is first a social experience (as in how it felt *in* the lesbian bar) that is then bestowed a tangible form (as in how it felt *as* the lesbian bar).

Conclusion

A sensory ethnographic approach, we argue, challenges assumptions that we know queerness when we see it. In doing so, we follow calls borne from non-representational theory to push against assumptions about what it means to be in the world, and instead experiment with alternative ways of exploring the relational movements of our social perceptions and practices (Thrift, 2008). Rather than assuming particular intersections of people, practices or places *as* queer, this approach requires us to consider how queerness manifests and materializes beyond the spectacle, antinormativity, or transgression often demanded of it. A sensory ethnographic sensibility allows researchers to attend more genuinely to the nuances of everyday queer scenes. Indeed, in the process of reflecting on anecdotes together for the purposes of this chapter, we found that, as Elisabeth Hsu (2008, p. 437) also argues, attempting to capture and represent sensory experience provides "ethnographers with new perspectives on sociality." This is because sensory experiences are highly social, and as many contributors to this volume have noted, sociality is highly sensory.

In this chapter, we have expounded on sensory ethnography precepts to model three ways in which this approach can yield unexpectedly dense connections between objects, places, practices, and people that may not appear queer at first glance. Through the slow-paced and retrospective process of making sense of our senses, we collectively come to render experiences as queer. As such, sensory ethnography lies not only in recognizing the role of the researcher's sensory experience in ethnographic encounters, but it is also an approach predicated on relationality. In each of these anecdotes, making sense of scenes was a collaborative process, which, in turn, promotes a collective sensibility between researchers and their objects of study. It is through this process that we find queerness in unexpected places that might otherwise have remained hidden if we relied solely on its visible means of recognition. Rather, a sensory ethnographic approach that pays more attention to myriad sensory aspects of how a given scene is perceived is valuable because it is more attuned to the contingency of what "queer" is or can be—and this extends to the ordinary and mundane.

We started with Berlant and Warner's "Sex in Public" as a provocation, allowing us to challenge a priori notions of queerness. Instead, we aimed to show that sensory ethnography may allow phenomena that are not visibly or recognizably queer to take on queer meaning. And so, sensory ethnography (as a methodology of approaching senses) is equally an epistemological position (i.e., sensing as a way of knowing). In short, the epistemological stance required of sensory ethnographers allows us to enliven queerness through methodologies

aligned to non-representational theories, compelling us to reimagine what can come to matter in our sensory experiences and practices.

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PART 6

Multimodal sensory ethnography

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32

LEARNING TO SEE, OR HOW TO MAKE SENSE OF THE SKILLFUL THINGS SKATEBOARDERS DO

Sander Hölsgens

Skateboarding is a mystery. It looks like an austere practice, a tool for social good, a discipline of failure. It presents itself as a subculture, an Olympic sport, a slice of masculinity, an embodied pedagogy. Yet as soon as we try to define and capture it, skateboarding morphs into an otherwise.

Perhaps we can start by zooming in on the things skateboards do—how these devices twist and turn, scratch the surfaces of architectural furniture, become one with their users. A skateboard is a tool used to perform tricks (McDuie-Ra, 2021); to express gender (Abulhawa, 2020); to produce architectural space (Bäckström & Sand, 2019) to make sense of the built environment (Glenney & Mull, 2018); to critique the city (Dickinson et al., 2022). A skateboard is hardly theorized when used: just as a skilled carpenter intuitively uses a hammer to hit a nail, a proficient skater experiences the skateboard as an organic extension of their body. It is readily available, assuming one is a skilled skater. Or, put differently: skaters simply skate (though things are never that simple, even in the case of skateboarding).

How do skaters acquire and perform these skills? In what ways do skaters become proficient at using these things we call skateboards? Why do skaters experience the city in the way they do? This chapter positions sensory ethnography as a set of approaches and sensibilities well-equipped for studying how skaters learn to see. The overarching aim is threefold: first, to draw useful connections between the phenomenology of skill acquisition and sensory ethnography; second, to apply this approach to the study of bodily skills; third, to show how sensory ethnography affords experiential outputs. Along the way, the chapter might touch upon some of the intricacies of skateboarding itself.

Part of the methodological contribution to sensory ethnography of this chapter is my consideration of tools and technologies as both devices for ethnographic research and situated means of representation. Specifically, I explore how a system of technologies can hearten our efforts as anthropologists to attune to the skilled activities of our interlocutors. This chapter suggests that an applied phenomenology of skill acquisition—centering how we become "enworlded" through shared skills and practices—has the generative potential to intimate and reverberate embodied and tacit knowledge within the field of sensory ethnography.[1]

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Sensory ethnography and the phenomenology of skill acquisition

Anthropological studies into skill acquisition display an interest in everyday activities: how to ride a bike, how to walk through a room full of objects without knocking them over, how to write one's name, how to brush one's teeth. These activities tend to take place habitually. If someone is proficient at combing their own hair, for instance, they wouldn't have to make conscious decisions to go through the motions: they simply comb their hair, while musing about the day ahead or engaging in other chores. These activities can be described as forms of skilled coping. They are all intuitive ways of responding to the task at hand within a specific context.

Since the advent of the twentieth century, the philosophical field of phenomenology studies and describes the structures of such everyday experiences. Phenomenologists research how the human body senses and attunes to the world: how do we orient ourselves (Merleau-Ponty, 1945[2013])? What do our bodies tend toward (Nancy, 2008)? How does it feel when we deviate from or queer these normative tendencies (Ahmed, 2006)? How do we reach out to the things that are reachable (Pallasmaa, 2009)? In summary: how do our senses help us to interpret and respond to our surroundings?

In the early 1980s, the Dreyfus brothers proposed a phenomenology of skill acquisition, displaying how everyday skills, such as playing chess or driving a car, are acquired (Dreyfus & Dreyfus, 1982). Beginners start by learning and actively enacting relevant rules and abstract principles. Initially, the enactment of such skills is non-situational. When first driving a car, most drivers are primarily concerned with effectively applying some principal rules and guidelines: which mirrors to check first when overtaking someone on the highway, how to properly respond to traffic signs, et cetera. While learning how to drive, the starting point tends to be the application of such rules and procedures—independent from the situation at hand.

By repeatedly performing such basic tasks, one can become competent at the respective practice (Dreyfus & Dreyfus, 2005). Eventually, when reaching the stage of being an expert, one has developed the skills to rely on one's intuition and become completely absorbed in the activity at hand. Being absorbed in an activity means that one can respond to the specificities and affordances of a situation. Rather than having to actively recollect and adhere to rules and regulations, a skilled driver can simply drive a car—to the point of experiencing the wheel and brake pedal as extensions of their body. So, instead of having to actively gauge or rationally calculate the appropriate braking zone, a skilled driver brakes at the right moment without thinking about the distance to a traffic light, the velocity of the cars ahead, or the pressure of the brake pedal. In such instances, the act of braking seems to happen in and of itself: "ultimately, as one gets used to recognizing situations, taking up an appropriate perspective, and responding to affordances for action, one gets so attuned that one no longer identifies affordances or situations as such" (Dreyfus & Wrathall, 2014, p. 8).

Dreyfus's phenomenology considers these processes of acquiring coping skills as the basis of our everyday engagement with the surrounding world. It responds to the

> idea that the shared everyday skills, discriminations, and practices into which we are socialized provide the conditions necessary for people to pick out objects, to understand themselves as subjects, and, generally, to make sense of the world and of their lives. (Dreyfus, 1991, p. 4)

Through skilled and embodied forms of acting/performing/knowing we find our place in the world. It's through the acquisition and performance of such skills that we become emplaced and "enworlded."

The anthropological turn to the senses has sparked an interest in phenomenology among ethnographers, especially those who study everyday practices such as walking, fishing, and dancing. In particular, there is an increasing interest in experiential and tacit ways of knowing, the non-verbal, affect, and embodied learning. Echoing the phenomenology of skill acquisition, for instance, anthropologist Cristina Grasseni (2004, 2009) proposes skill-based activities as a starting point for studying the structures of everyday experiences. Grasseni found that cattle breeders are attuned to the cattle to such an extent that they notice at first glance which animals are healthy. It's a skilled mode of filtering sensory input and discriminating between what's useful and what isn't; it's a way of looking at the world, which—in the case of cattle breeders—is learnt through a schooling of the senses and via apprenticeship. Grasseni proposes the concept of skilled vision to understand how breeders learn to observe cattle: within the context of her research, skilled vision denotes the breed experts' capacity to instantaneously observe what animals would be "appropriate" for further breeding.

Sensory ethnography, in its multifaceted and multimodal exploration of lived experiences and everyday life, is particularly concerned with the phenomenology of skill acquisition (Pink, 2015). As detailed elsewhere in this volume, this hodgepodge of approaches, practices, and sensibilities offers a set of mixed-media methods, theoretical reflections, and pedagogical tools through which to study embodied social practices. The concept of skilled vision is one example, yet there's much more: sensory ethnography can be about the embodied positionality of the researcher (Nakamura, 2013; Fiore, 2021); about the human body as the principal locus for methodological and theoretical interventions (Sinha, 2021); about the experiential potential of multimodal output (Westmoreland, 2022).

Some anthropologists working within the field of sensory ethnography take this as an invitation to think more radically about theories on embodiment, others see it as an opportunity to further break down the barriers between the arts and the social sciences. Yet what binds all is that sensory ethnographies investigate the layered and expressed relationship between sensory perception and situated forms of expression. Centering corporeal and multisensory knowledge in ethnography, the questions sensory ethnography poses include the following: How do we (our bodies) come to know? What does embodied knowing look and feel like? How to study our skilled engagements with the world?

The study of bodily skills and the skater's eye, or learning to see like skaters do

Skaters love and hate cities. It's their decor for performing tricks, as much as it's the environment where they face animosity—most visibly in the shape of defensive architecture ("no skateboarding" signs; skate stoppers; sectioned benches). Skateboarding especially thrives in modernist cities, or the urban spaces that are crammed with functional and purpose-built design. The simpler the forms and materials of street furniture, the more inviting it becomes to skaters. Ledges, staircases, handrails, benches, and ramps are particularly well-equipped for slides, grinds, and jumps. Street furniture tends to be tailored to the scales and mobilities of the human body, while often being surrounded by empty space—pavements, gaps, corners, patches of grass. Their surfaces range from the smoothest polished granite to grainy asphalt, inviting different types of skateboarding. Though seemingly mundane and one-dimensional,

skaters expand and respond to the affordances of such obstacles in creative and performative ways.

Skilled skaters have the capacity to scout the city for such spatial contours. As Iain Borden (2001, p. 219) writes, "skateboarders analyse architecture not for historical, symbolic or authorial content but for how surfaces present themselves as skateable surfaces." A crucial element of this form of skilled vision is the embodied engagement with and appearance of the skateboard, which is "absorbed into and diffused inside the body-terrain encounter" (idem, p. 100). (Recall the carpenter and the hammer: tools, here, become a felt extension of the body). Borden captures this by using the umbrella term "the skater's eye." This concept denotes the capacity to, instantaneously and without (much) reflection, gauge whether a space is skateable. Centering the interplay between the senses, it is an exquisite and complex coping skill that skaters use to negotiate urban space. Body, equipment, and space are oriented toward each other, informing and conditioning how skaters relate to the world they inhabit. More specifically, the skater's eye is as much about the recognition of skateable spaces as it is the principal means through which skaters use and reproduce architecture in unforeseen and innovative ways (Hölsgens, 2018, 2019, 2021).

The skater's eye is historical, too: it marks the awareness as to whether a particular trick has already been performed at a skateable space—including whether and how such a trick is part of a collective memory and the (unwritten) history of skateboarding. Scouting the city for skateable space, then, blends an interest in the affordances of architecture and an incorporated knowledge of the skaters on whose shoulders one stands. The skills needed to train the skater's eye, in other words, aren't merely tricks based: proficient and expert skaters intimately know the cities they traverse, not just by way of their own bodily skills, but also by actively recalling and building upon a collective memory. Skate media like Jenkem and Thrasher Magazine dedicate media posts to document and reinforce this collectivity: in the *Neighborhoods* video series skate videographer Greg Navarro (2022, n.p.) visits multiple cities to "to see what the streets and spots can reveal to us about their early lives and maybe even their current selves." Navarro meets up with local skaters, who take on the role of tour guides. Throughout the videos, these skaters showcase skatespots in their hometowns and tell evoking stories as to who's skated at these spots before (and how that slots into skate historiography).

Relatedly, the skater's eye intimates that cities can be more than sites for neoliberal activities: beyond shopping and working, the built environment also affords affective, tacit, and imagined modes of negotiating space. Skaters know which urban spaces are skateable, not just in terms of the spatial and architectural affordances, yet also in terms of how the space is used by non-skaters. Being aware as to when it's busy in the area surrounding a skateable spot, who's designed a space (and why), and how the performance of tricks can be a political act: skaters are psychogeographers constantly on the move. This skillset is interwoven with skateboarding's exhaustive relationality to failure. Learning tricks, or working toward the mastery of movement, is punctuated by falling, trying, hardship. On the one hand, this omnipresence of failure is part of skateboarding's dominant narrative of resilience. Failure in skateboarding is part of a narrative on resolve, hardiness, and self-reliance (Hölsgens & O'Connor, 2022). Bailing and failing are the prizes for skating at your best: the harder the slam the tougher the skater. Scuffs and abrasions are trophies derived from fails, highlighting that a skater is someone who perseveres, who falls and gets back up, who's a self-made role model.

On the other hand, there are skaters who critique such perceptions of failure. Skate collective *Tired* makes videos featuring aging skaters who break away from skateboarding as a

spectacle: instead of scouting for remarkable skateable space, these skaters perform simple tricks on small obstacles (Willing et al., 2019). Bethany Geckle and Sally Shaw (2022) use the concept of queer failure to point toward such ways of defying narratives of the hustle and disciplining the body. Queer failure, here, "is not a lack of success as much as it is an unwillingness to adhere to the hegemonic terms of success defined by a heteronormative, capitalist society" (idem, 134). Rather than dramatizing and championing failure as a grand act, queer failure can produce new meanings that challenge punitive models of embodiment (and, in so doing, critiquing skaters who merely scout the city to conquer new skateable space, like a settler colonist would).

In short, skateboarding seems topical for sensory ethnographers: it's a social practice centering multisensory engagement with the environment; it's individual yet community-driven; it's site-specific while having a global outreach; it's a set of bodily techniques; it's learnt by way of doing; it's ritualistic and routine-based. Researching how skaters learn to skate opens up a space to critically reflect on the relationality between coping skills and emplacement. An intimate portrait of the spaces where skaters learn to see and move renders it possible to critically examine networks of everyday mobility. Below, and by way of case study, I explore how images and the embodied practice of image-making shape how skateboarders acquire bodily skills to navigate urban space in the city of Seoul. By the same token, I will extrapolate how anthropologists might apply a similar approach to sensory ethnography within their own work.

How sensory ethnography affords experiential outputs: mimetic reproductions as learning tool

Skate videos generally revolve around the representation of tricks. In the 1980s, new camcorder and video technologies gave rise to skate brands producing "elaborate manufacturer videos showcasing professional team skaters" (Borden, 2001, pp. 116–117). One cinematic trope within the genre of skate videos is the use of fisheye lenses, which bring about a horizontal field of view that equals approximately 180 degrees and renders straight lines in a spherical manner. The ultrawide angle and visual distortion allow videographers to get up-close to skaters, while keeping the surrounding architectural space in focus. For David Buckingham (2009), this heightened sense of image-based motility proposes an aesthetic of spectacle. By routinely disregarding tripods and minimizing long shots and long takes, videographers also tend to use camera-mounted microphones that are consistently positioned within an arm's length of the skater, recording the grainy and rattling vibrations of wheels and trucks touching concrete floors, wooden ledges, and metal handrails. Skate videos, in short, tend to be filmed from below (McDuie-Ra, 2021).

Åsa Bäckström (2014, p. 757) argues that "propositional knowledge in skateboarding, such as the ability to distinguish certain tricks by how they look and what they are called or to explicitly describe how to perform a certain trick to a fellow rider, refers to an articulated, consciously accessible 'knowing-that.'" Much of this knowledge is acquired through or reinforced by skate videos. While skate schools are on the rise, there's a limited group of skaters who acquire skills by way of direct forms of apprenticeship. Instead, learning to see skateable space is a muddy praxis—bridging knowing-by-doing, skating-alongside-experts, mediated forms of learning. Within this chapter, I particularly focus on the latter, and skate videos in particular. Not only are these images a straightforward reproduction of bodily skills, these filmic reproductions are also, conversely, copied via bodily skills.

This is exemplified by *Peniscolada: Hunger* (Kwak, 2016), an 11-minute video featured on Seoul's most popular skate platform, *Daily Grind*. The video, filmed and edited by Kyungryun Kwak, opens with an image of four figures against the background of piled up beer crates, moving from voyeuristic recordings of a group dinner and an elderly lady to an undefined body who appears to skate. The four-by-three aspect ratio—reinforced through the circular fisheye lens, the muted color scheme, and the digital grain—elucidates and reveals the aimed-for tonality of the video: a formal homage to the heydays of full-length Northern American skate videos with the Sony vx1000, an antiquated recording device from the early 1990s that is interwoven with advent of street skateboarding. As the Seoul-based videographer Hotminator says in a 2021 interview with Free Skateboard Magazine:

> All of my favourite videos were filmed with the vx1000. With vx, I can use my arm very actively, putting my vx deep into the angle. Of course, I broke lots of lenses doing that, haha. hd camcorders make me feel like I need to keep distance from a skater.
>
> *(Harmon, 2021, n.p.)*

Hunger, being filmed with a handheld vx and withholding itself from showing brand logos, reverberates an idealized aesthetic of street skating, which is filmed at an extreme angle and putting the filmmaker—or at the very least their camera—at risk.

Amplified through elaborate sound editing, the framing of a male skater in camo pants and white sneakers recalls the suppleness and *modus operandi* of videographers from another decade: in line with Northern American skate videos like Osiris's *The Storm* (1999) and Alien Workshop's *Photosynthesis* (2000), videographer Kyungryun Kwak discloses his bodily capacity to film in close proximity of skilled skaters, constantly readjusting his bulky, plastic film equipment, and depicting skilled bodies in motion. *Hunger* is a video of visual contrasts: being predominantly recorded during Seoul's unfathomable autumn nights, Kyungryun's vx1000 is equipped with an extra camera light, overexposing the skin of able-bodied skaters, as well as the fabric and leather of attire, while the surrounding architectural space is rendered in a distressingly underexposed and hardly perceptible manner.

In one of the most intricate compositions, streets, pavements, and incoming traffic only enter the spectrum of the audience's eyesight tenths of seconds before skater Shin Jun Seop is forced to skillfully cope with them. Still, Kyungryun's entire body, and specifically the gestures of the firm hand with which he holds and negotiates the position and angle of his camera, is decidedly oriented toward the terrifying darkness of the city-at-nightfall and the prodigious unpredictability of the performing body in front of him. But then there are the experiential and phenomenological implications of the mimetic encounter with the built environment: mimesis, here, is rooted not only in the skillful displacement of the human body from recognizable spaces into an indeterminate cityscape, but also in the gestural handling of the camera and the sensory and skillful forms of coping with the severe and sharp outlines of the city's many Euclidean landscapes and geometrical spaces.

To sense and experience architectural space is to come to inhabit it—to habituate oneself to it. Sensing is a habitual form of attuning oneself to and orienting oneself toward the intimate corners and reverberating indications of, in this instance, architectural minutiae. In *Hunger*, the sensory orientation toward architectural space is as much a habitual performance of skills as an acute mimetic encounter with unknown, found space. More specifically, what's at stake is the notion of *begyon*, a Korean noun that carries a multiplicity of meanings: it's a frame of imagery and a painterly scenography. In the context of skateboarding it denotes a

desired type and aesthetic of skateable space: industrial, urban, rough, underground. It is a reenacted imaginary of Southern California, or what Paul O'Connor (2020, p. 49) calls the putative homeland and quasi-holy land: "a territory full of sacred sites and cultural heroes" that "represents the values, aesthetics, and language of skateboarding."

Foregrounding *begyon*, the bodily skills performed in *Hunger* resonate with, echo, and embody the attractive yet partly preposterous idea of skateboarding as being intuitive and subversive. In Seoul, videos of this sort copy the appraised idea that skaters must be able to weigh their skills against this type of urban space, so as to communicate to a global audience that Korean skateboarding embodies the core of the practice. "Bodies are shaped by histories, which they perform in their comportment, their posture, and their gestures" (Ahmed, 2006, p. 552), and some Seoulite skaters embrace a mythologized history of skateboarding as their basis for embodied and skilled mimicry. The rowdy and motile mode of bodily orientation toward traversing streets and pavements in an energetic, powerful manner—as is at the heart of *Hunger*—exhibits the embodied enactment of an imaginary typology. Videos like *Hunger* are a sensory and mimetic testimony to an Idea of Skateboarding, materialized via a particular architectural typology.

Hunger is part of a mimetic world, in which the old is made new and lived experiences are retold, rearticulated, and rigorously choreographed, so as to reenact a glorified idea of what skateboarding ought to look and feel like. The video is structured around the bodily and

Figure 32.1 Skateable begyon, still from Holsgens (2018).

skillful engagement with skateable *begyon*, partly in order to reference and position oneself in close proximity to the existing corpus of skate videography, and especially the kinds of videos that are claimed to breathe street culture and the underground. Within videos like *Hunger* (2016), there is a filmic taxonomy built into their formal structure that hardly distinguishes between the act of referencing or citing the historiography of skate videos and the attempt to build a site-specific and distinct practice.

Hunger disguises the urban characteristics of Seoul, precisely by rendering its found urban spaces nearly invisible or at least hardly recognizable: skyscrapers appear blurred and veiled, whereas public squares and streets are filmed with such deftness and velocity that they enter and leave the frame before spectators can take in and review much of the architectural space at hand. The seemingly decontextualized choreography of tricks makes it hard to discern where *Hunger* is made. This is precisely what skateable *begyon* denotes: the noisy, slightly obscured and veiled, yet unmistakably urban backdrop that renders skateboarding underground. These are spaces that either tend to be forgotten or ignored, or are structured around some of the more generic architectural details one would be able to find while visiting other metropoles: unspecified pavements, streets, and public plazas. It's against this backdrop that skaters in Seoul learn to see skateable space.

Representing skills through VCR tapes

"The experiencing, knowing body," writes Sarah Pink (2015, p. 28), "is central to the idea of a sensory ethnography," which presents experiential intersubjectivity as one of its central tenets. In centering corporeal and multisensory knowledge, sensory ethnography encouraged me to unpack how the experiences and imaginations of skaters are entangled with the spaces they inhabit. By attuning myself to muscular sensations, everyday encounters, radiating surfaces, permeating noises, and recurrent affectivities, I set out to explore how skaters in Seoul learn to see. Being involved in photography and film projects, while skating alongside my interlocutors, sensory ethnography proved to be a methodological companion to work toward an embodied understanding of skill acquisition.

Orienting a specific set of anthropological, philosophical, and artistic approaches toward each other, sensory ethnography is first and foremost a situated practice. An effective and meaningful application of sensory attunes and responds to specific lifeworlds (Jackson, 2012). The project described in this chapter merges the following components:

1 Developing an anthropology of the senses, particularly by scrutinizing how the philosophical field of phenomenology can be helpful in providing a framework for researching skill acquisition.
2 Conducting visual ethnographic research on how my interlocutors acquire skills, scrutinizing how they learn to see the city through (a) the shared practice of skateboarding, (b) responding to the affordances of found urban space, and (c) creating and reviewing audiovisual documents.
3 Positioning some of the key technologies and tools my interlocutors use (the skateboard; the vx camera; mini DV tapes) at the heart of my methodology.
4 Translating the audiovisual output of these efforts into a mimetic video that invites the spectator to discern the superimposition of technology (representation) and skill acquisition (sensory experience).

These last two steps are vital in my understanding of sensory ethnography. By choreographing and staging encounters between skilled bodies, noteworthy places, collective memories, and distinct tools, my research set out to create a form of interstitiality, or in-betweenness. Rather than making the epistemological claim that practicing-alongside-practitioners or filming-with-filmmakers would allow for a better approximation of someone's lifeworld, it is a decisive move to foreground the ramifications of mimesis. In other words: the methodological toolkit of sensory ethnography might enable us as anthropologists to at once work toward affective proximity and critical consideration, bridging thick description and storytelling with aesthetic sensibilities and multimodal output. I would like to highlight this methodological approach by pointing toward the ethnographic video I made as a response to my data interpretations.

My research video *VCR* (Hölsgens, 2017) responds to my interlocutors' felt, choreographed, and representational encounters with the built environment, in order to reflect upon and respond to the concept of skateable *begyon*. Specifically, *VCR* embraces and amplifies how Seoul-based skaters (re)present and (re)position themselves via the use of video cameras. The video furthermore intends to work through the cinematic techniques and conventions through which Seoulites reproduce these sensory engagements with skateable *begyon*. This is the principal reason for not only incorporating rushes I recorded with a 1999 Sony Handycam and a Sony vx1000, but also working through the audiovisual material I

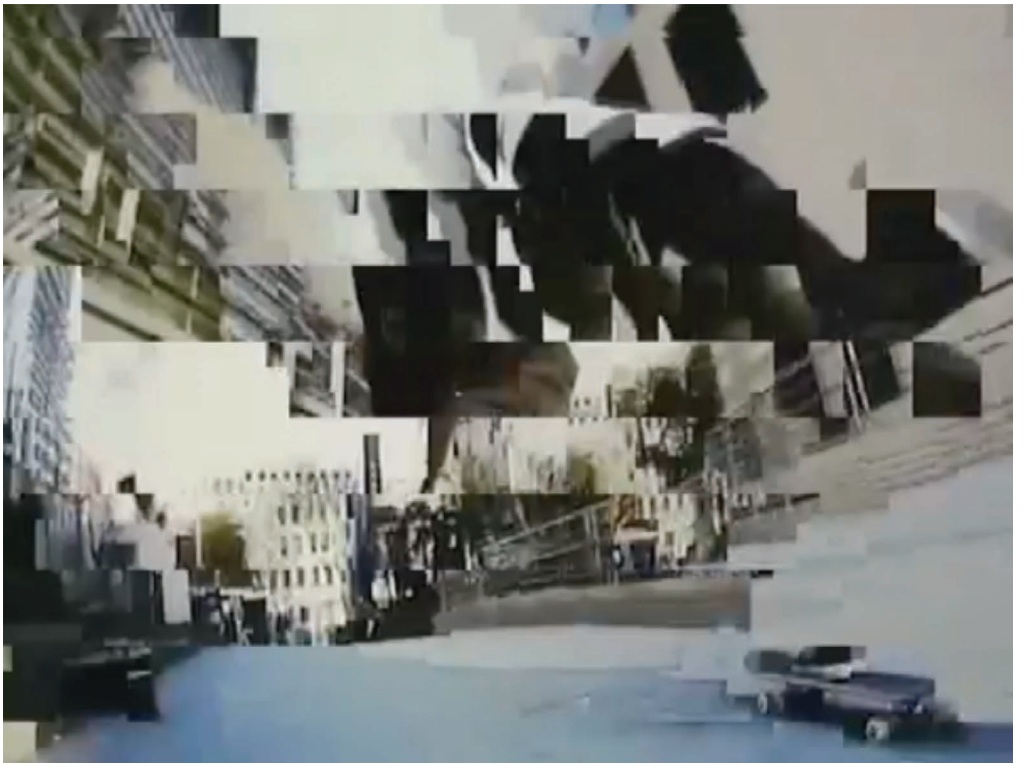

Figure 32.2 Scan lines and artifacts in skatevideos, still from VCR (2018).

kindly received from interlocutors: in this collaborative effort the aim was to highlight the practice of learning to see skateable *begyon*.

One of *VCR*'s formal focal points is the process of repeatedly refilming and rerecording footage, so as to accentuate the scan lines, digital artifacts, and unpredictability of video tapes. Unlike digital cameras, upon which nothing is lost, frequently reused video tapes are overflowing with traces and indications from earlier recordings. This can affect the frame-rate, soundscape, and color scheme of the recording, albeit ever so slightly. I recorded all my acquired and filmed material via a VHS video recorder, and layered certain scenes on top of one another, after which I transferred the by now analogue material unto Mini DV tapes. I subsequently rearranged these tapes into a video of approximately 20 minutes.

When discussing the "anthropologist story-(re)teller," or the storyteller who is commonly identified as an ethnographer, Taussig (1993, p. 16, italics in original) argues that the reproduction becomes

> a sensuous sense of the real, mimetically at one with what it attempts to represent. In other words, can't we say that *to give an example, to instantiate, to be concrete*, are all examples of the magic of mimesis wherein the replication, the copy, acquires the power of the representation?

The copy is not exactly that which it is a representation of, but it does become more than itself, namely by acquiring the properties and qualities of the original. Methodologically, *VCR* is a direct reflection on the ethnographer's task to select, curate, and edit thin and thick slices of fieldwork into both a pertinent argument and affective communication (Wright & Schneider, 2010). Existing as an audiovisual paratext, *VCR* gauges the sensation of repeatedly recording and playing back rushes of video material, as if to get hold of the skills and techniques exhibited, to decipher the cinematic form itself, or to make the sequences one's own. The rushes, offered to me as though they were small, audiovisual gifts, exhibit how this group of skaters perceive and embrace found urban space: through its mediation and reproduction.

This video, edited on a single Mini DV tape, was already composed out of multiple layers of recordings, and the 8-mm strip appeared to me to be cramped with miniscule, yet noticeable artifacts: some of which are the result of Seoulites constantly reusing tapes like these, others resulting out of my manual process of recording, rerecording, and layering a diversity of sequences. Here, *VCR* seems to me to exist in between analogue and digital film, for although DV stands for "digital video," my use of VHS video recorders affected the image quality, and complicated considerations of medium specificity. At the very least, *VCR* embraces the scan lines and artifacts that mark the kinds of mimetically capacious machines that the skaters I worked with prefer for reproducing their sensory engagement with the built environment: video cameras designed in the early 1990s, with a specific interest in the historical legacy and aesthetic affordances of the Sony vx1000.

Whereas *Hunger* strives for a low-fi representation of the city, *VCR* points to the materiality of DV cameras, including the capacity of video recordings to create textual interstitiality, or the "discontinuities that subvert the sequentiality of film language" (Rascaroli, 2017, p. 26). The digitization of tapes demands real-time recordings, which means that any interference will directly affect the digital outcome. This allowed me to fast-forward and slow down sequences—not by turning to software to achieve such effects, but by using the physical means of my DV camera and VHS recorders to maneuver between different scenes,

Figure 32.3 Reenactments. Photo shoot against backdrop of found space, still from VCR (2018).

images, and soundscapes. As a result, these interstitial changes in tempo partly act as transitions between sequences, but also caused a myriad of audiovisual distortions to be literally impressed onto the recording.

VCR's opening sequence is indicative of this form of in-camera editing. For the first couple of seconds, the film shows a blue screen, accentuated by the invasive and intrusive noises of a DV tape being inserted into what sounds like a partly automated camera. The image turns dark gray, being filled with noisy interferences, after which it sounds as though the filmer/user is skimming through the DV tape, during which one is confronted with hardly discernible visual clues of a human body in a monochromatic urban context. At the very moment during which the sonic noises of the camera seem to be brought to a halt, a small playback button appears on the top right corner of the screen—as if this icon suggests the opening sequence of a film that is still in the process of being edited. Then, finally, a skater enters the frame, giving room to *VCR*'s first diegetic sounds: the cluttered and impactful noises of wheels on concrete.

Here, the film's scanlines become the center of attention, not only referencing videos from an earlier era, but also rendering the skating body and architectural space in an imprecise, constantly moving, and intentionally distorted manner. Further on in the film, such digital artifacts seem to be more directly impressed and imprinted unto the human body, so as to suggest that one cannot simply differentiate the sensory and skillful exploration of skateable

Figure 32.4 Learning to see skateable space through media, still from VCR (2018).

begyon from its filmic representation. In these later scenes, the human body becomes a video body: "not 'video' = 'I see,', but video as a generic name for the techne of a coming into presence. Techne: 'technique,' 'art,' 'modalization,' 'creation'" (Nancy, 2008, p. 65). The film, in other words, opens with a call to reorient one's expectations of the audiovisual aesthetic and ideological focal points of skateboard videos, foregrounding the affective and bodily implications of technology as such.

VCR is a careful combination of the archaeological process of discovering, examining, and curating multiple hours of video rushes, and montage techniques through which to evoke the dynamism, the heightened and bodily sense of the rhythms of urban space, as well as the low-fi aesthetics that are at the heart of many of Seoul's skateboard videos. Most of *VCR*'s scenes begin with movement, which is understood through bodily rhythms, only to conclude with the equally rhythmic construction of the video material through montage. The seemingly decontextualized choreography of tricks makes it hard to discern whether some of the sequences in *VCR*—and indeed, much of Seoul's rich skateboard videography—take place within the Korean capital or within another metropolis or urban context. This is precisely what *begyon* denotes: the noisy, slightly obscured and veiled, yet unmistakably urban backdrop. These are spaces that either tend to be left behind, forgotten, or ignored, or are structured around some of the more generic architectural details one would be able to find

within contemporary metropoles: unspecified pavements, streets, and public plazas. Here, in the urban shade, there is room for the acquisition of bodily skills.

Technology, in *VCR*, presses close to and touches the human body, insofar as to render both inseparable. As a sensory ethnography, *VCR* superimposes audiovisual mediation on the body and equipment of skilled skaters and architectural minutiae of the city. This editing process, grounded in the practice of skating and filming together, has opened up a space to rethink and think through the relationality between embodied knowledge, mediating technologies, and urban space. *VCR* embraces and amplifies how Seoul-based skaters (re)present and (re)position themselves via the use of video cameras: it's an attempt to render visible and audible how skaters in Seoul might scout for skateable space.

Note

1 Parts of this chapter are derived from or revised reflections on my PhD thesis, *A phenomenology of skateboarding in Seoul, South Korea: Experiential and filmic observations* (2018), made open access as *Skateboarding in Seoul: A Sensory Ethnography* (2021). I have obtained written consent from relevant parties to do so.

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33
THE SOUND REMAINS
Archiving the senses

Rupert Cox and Junko Konishi

Listening across the senses

This chapter reflects on the cultivation, through extended fieldwork practices of sound recording in Okinawa Japan, of a sensory attunement to the differences between hearing and listening (Lane & Carlyle, 2013; Nancy & Mandell, 2007). This is a subtle and elusive distinction which is difficult to articulate through text on its own because text can struggle to describe the non-representational realm of sounds that lie at the furthest extent of, and even beyond, the audible. I examine this distinction in relation to the sound archive, treating it as an assembly of intersecting layers of tracks and texts, as well as images which have the capacity to work on a multi-sensorial level to describe what listening means in an ethnographic context. The chapter makes a case for the sound archive as a form of sensory ethnography through its multimodality and because the sound recordings that comprise the collection are rooted in an ethno-aesthetic attention to the language used to talk about sound and listening, as well as the artistic genres, conventions and conversations that are particular to Okinawa in representing the sound environment. The making of sound recordings that we will discuss here were guided by these contextual reference points. They allow us to examine not just what sounds were present in any environment to be recorded, but to explore first how perception works in the context of the field site and then look at how certain spaces may "speak" to allow us to listen to the sounds that remain in place.

Shuri castle

The wood and stone Kankaimon or "welcome" gate at Shuri castle in Naha city, Okinawa (Figure 33.1), is the first of the main gates to the castle and a main thoroughfare for visitors passing in and out of this World Heritage site. The opening and closing of its two wooden doors, installed in 1974 as replacements for those which had been burnt down during the Battle of Okinawa in 1945, regulate the hours that the castle is open to the public. They also operate within a sensory register, marking time at the castle as sonic events heard by staff and visitors alike. Their sounds involve the elaborately polite verbal greeting and farewell by the resident security guard who is dressed in ceremonial kimono, the rasping of an iron key as it

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Figure 33.1 The Kankaimon gate at Shuri castle, Naha city, Japan.

revolves three times in the door's iron lock, the scraping of the base of the door on the stone pavement and the reverberations of wooden bolts within the door's wooden frame.

It was these sounds that brought us to the gate on the evening of Saturday, October 12, 2019, to make sound recordings which would be part of an extensive Okinawa Island Archive (Cox et al., 2022), representing the culmination of collaborative, interdisciplinary research conducted since 2007 about the sound environment in Okinawa. The sounds of this gate, like the sounds of the *fusuma* sliding doors that I (Rupert Cox) had just recorded being drawn shut in the *Seiden* or "main hall" of the castle were a way of animating and therefore of hearing the spaces that the doors and gates enclosed, by creating an acoustic event. The sound of the shutting doors and screens would make the space resonate and therefore audible. The sound of the gate closing can be listened to on our book's companion website.

It was a blustery autumn evening and as often happens in field recording, unanticipated exterior forces—a gusting wind, leaves rustling, raised voices and distant sirens—disrupted the idea of a "clean" recording that I had hoped would be possible. I packed up the recording gear and headed back with my companions, Professors Konishi and Hiramatsu who had spent the day and indeed the two weeks prior helping to organize and find permission for us to make recordings in locations all over the island of Okinawa.

I returned a few days later to the UK and a little over two weeks afterward heard the tragic news that early in the morning of October 31, at around 2.30 a.m. a fire broke out at the castle which utterly destroyed the *seiden* hall as well as other areas of the state palace such as the Hokuden, *Nanden* and *Bandokoro*. No official cause for the fire has been announced but it is widely understood to be the result of an electrical fault. In the years since the fire, the castle's symbolic positioning as the sacred center of the Ryukyu Kingdom has made its reconstruction a matter of national as well as local pride and the ongoing work to restore the castle has brought into relief the nature of the recordings that I had made as documents and memories of spaces of heritage that materially didn't exist anymore.

What would these recordings mean to those who had worked and known the castle from before and since the time of the fire? What was the nature of these recordings that existed without a physical referent and could their position within the Okinawan Island Archive they had been made to complement tell me something about the notion of a sound archive itself and how it might be approached as a sensory ethnography?

These were some of the questions that brought me back to Okinawa in January 2023 where I found myself with my colleague Junko Konishi late one afternoon, approaching the same Kankaimon gate, which had fortunately survived the fire intact. We related the story of our pre-fire recording of the sounds of the door's closing to the security guard a Mr. Hiromu Ikeda, asking if he too attached significance to these sounds. He responded unhesitatingly, saying that these sounds connected him to a source of intense frustration because the scrape of the door's base on stone and the repeated metallic clunks of the locking mechanism showed how unevenly the door now fitted into its frame (Figure 33.2), and therefore how difficult it was to operate as part of his daily working routine.

Ikeda then went on to relate a remarkably detailed and nuanced description of different sounds in parts of the castle, particularly those now destroyed by the 2019 fire. These included the "drip drip" (or *chon chon* in Japanese onomatopoeia) of water droplets seeping inside the lacquered wooden pillars of the *seiden*. Hidden beneath the many layers of encasing red lacquer and activated by the intense summer heat, this process was described by Ikeda as something like *shibo rareru*, which is to say like the sounds that come from the ringing out of a wet towel. Ikeda also spoke of the ways that different types of wooden flooring, such as

Figure 33.2 Hiromu Ikeda gesturing to the uneven stone pavement at the Kankaimon gate.

hinoki (cypress) and *inomaki* (Japanese yew tree) made distinctive sounds when walked upon and of the ways that different winds, such as the *gyaku sumuji kaze* (upside down wind), resounded through various rooms at different seasons. Most intriguingly, Ikeda talked of the strong sense that he had when present in the *seiden* of the sounds of people, giving the example of their footsteps, remaining in a room even after they had left. Ikeda emphasized this was not a "spiritual thing" (*rei-kan*) and used the phrase *oto ga nokoru* ("the sound remains") to explain that the sounds must have had a physical existence, although they were inaudible to him and to others as sounds that could be heard. Although these sounds were doubly removed, in the sense that first they were from a place that no longer physically existed and, second, because their energies did not appear sufficient to register at the level of human hearing, Ikeda speculated in a later conversation that the directional, parabolic microphone I carried with me might be able to record these sonic residues of human presence.

Ikeda's sensitivity to these elusive sounds and ways of listening, based on his 14 years of experience working at the castle, was reinforced a few days later when he led myself and Prof. Hiramatsu on a soundwalk of his own devising around the castle grounds, taking us at one point to one of the castles *utaki*—a sacred space, often a grove in the Okinawan religion, but also a cave or grotto—where we were encouraged to put our ears to the stone wall that enclosed the small grove, so as to try and hear the sounds that were preserved within its material matter (Figure 33.3). This act reminded me of Paul Carter's (2016) essay in the book *Beyond Text; Critical Practices and Sensory Anthropology* (Cox et al., 2016) where he draws on Ovid's account of the afterlife of Echo in caves and grottos, to make a case for the wall as a "site of whispering, a gathering place of echoes and the privileged haunt of the one who overhears" (Carter, 2016, p. 94). The listening or overhearing that Carter evokes, in this relay with architecture, is not to be confused with "the symbolic hunger" and "signifying chains" associated with hearing, but is about a pre-semiotic openness to noise that for him may still lie beyond the purview of the multisensory anthropologist (ibid). An example of this "overhearing" in the Japanese context comes from Keiko Torigoe's description of a public "silent places" contest in Tokyo's Nerima ward, where residents were encouraged to identify and describe a favorite silent place. The results, showed to Torigoe (1994, pp. 6–8), a historically rooted appreciation for "phantom sounds," which as Imada (1994, p. 5) indicates,

Figure 33.3 Professor Hiramatsu (left) and Hiromu Ikeda, listening at the wall of one of Shuri castle's utaki.

included instances such as the practice of people in the Showa period (1925–1989), coming together in early summer at the *Sinobazu-no-ike* pond in Tokyo to listen to the bloom of a Lotus flower. For Torigoe this means that in Japan,

> when it comes to sound culture we have to consider not only the sounds we create or we hear, but also the sounds of which we are not conscious, or which we think we do not or cannot hear. Sounds of the past, sounds of the future, sounds in our memories and dreams—all these kinds of sounds should be included.
>
> *(p. 7)*

Ikeda's sound-walk and descriptions of Shuri castle's sounds were notably rooted in his memories and imagination of spaces that since the fire no longer had a material existence. Although I brought my sound recorder on the walk and Ikeda conjectured, it may be capable of recording these elusive sounds, it was used only to record his conversation.

The kind of sensory tuning into the way that sound may carry tangible force as a foundation of experience which Ikeda's sound walk and Torigoe's research describes is not particular to Japan. The foundational accounts in the development of a sensory ethnography of sound by Paul Stoller (1984), who writes of the "inner" dimension of sound in the cultural experience of the Songhay of the Republic of Niger, and by Steve Feld about the Kaluli of Papua New Guinea, have shown how "sound expressions are revealed as expressions of deeply felt sentiments" (Feld, 1982a, p. 3). At one level of sensory interpellation, that is at the level of hearing, the encounter with Ikeda can tell us about the cultural construction of a sensory modality and about the rich symbolism of Shuri castle and the various meanings of its spaces and materials. At another level, that is at the level of listening, other dimensions of sounds become apparent which are about the kind of sensory memory a sound may produce and indeed how the medium of sound itself can be conceived as a memory of place, remaining as a sense of place even when it is inaudible. In another sensory modality, the modality of taste, Seremetakis (1996) writes about a comingling of memory and the senses where the evocative reminiscence of the taste of peaches from her Greek childhood demonstrates the mnemonic resonance of things that may become part of the historicity of culture.

This was one of the findings of my long-term collaborative research in Okinawa (Cox & Hiramatsu, 2011; Cox, 2012, 2023; Cox & Carlyle, 2015, 2016, 2017; Cox et al., 2022) where we found that sound does not exist only in place but in memories of place that reside in the senses and may potentially be "listened" to through practices of sound recording and the creation of multimodal works, such as films, gallery installations, an art-book and a sound archive. Through the interdisciplinary collaboration as an anthropologist (Rupert Cox), sound artist (Angus Carlyle), acoustician (Kozo Hiramatsu), musicologist (Junko Konishi), and bioacoustician (Nicholas Friedman), I (Rupert Cox) came to realize that the sounds we were collecting and assembling as an archive may exist both as a record of a physical event in time and space that works diegetically in a signifying chain, but also operate non-diegetically at an inaudible level, as a sensory memory of that event. In the Okinawan worlds, we have been investigating, an eclectic variety of elements of the sonic environment—for example, the sounds of waves, winds, land crabs and even the susurration of the leaves of sugar cane—are sounds that resonate in environments at both audible and inaudible levels of experience. This condition of listening was central to our understanding of how the remembrance of the Pacific war and the militarization of the Okinawan environment in its aftermath had an impact on health, well-being and social relations, as well as political discourse and activism

because of the way that certain sounds, such as the sounds of military jets from the US bases, would remind Okinawans of the "belliphonic" (Daughtry, 2015) wartime sounds and remain active as a sensory memory even when the planes were not flying (Cox, 2023).

The Okinawa Island Archive

The Okinawa Island Archive, published by Alexander Street Press (Cox et al., 2022) is one realization of research findings about the ways that "the sound remains." It was conceived as an assemblage to bring together all of our recordings from the research carried out across Okinawa between 2007 and 2019 by myself (Rupert Cox), Kozo Hiramatsu and Angus Carlyle and separately by Nicholas Friedman between 2016 and 2022. The published archive represents a curated selection of recordings which offer a particular description of environmental sound in Okinawa, organized in terms of locations, events, practices, and behaviors at the human and animal species levels. What is meant by "environmental sound" in this research, began for myself, Hiramatsu and Carlyle as a question about noise, specifically the noise emanating from the US military bases constructed on Okinawa in the aftermath of the Pacific war. Okinawa is one of 47 prefectures in Japan and the population and surface area of its islands comprise about 1% of Japan's total population, but it is host to over half of the 100,000-plus US military personnel in the country. The impact of these bases on Okinawa's human and habitat health occurs in different ways, including through various kinds of pollution, among which anthropogenic noise plays an important role.

In Okinawa, the issue of aircraft noise emanating from US bases has long been an object of intense political negotiations about the past and future identities of those citizens who have to deal with its effects on their health and social life. This was powerfully demonstrated by the epidemiological study led by Hiramatsu between 1995 and 1999 (Hiramatsu et al., 1997, 2002). This study demonstrated the negative effects of aircraft noise emanating from the Kadena US airbase on people's hearing acuity, the conduct of everyday life, as well as general health, children's behavior and infant birth weight. Subsequent research and collaborations between myself Hiramatsu and Carlyle (Cox & Hiramatsu, 2011; Cox & Carlyle, 2015, 2016, 2017; Cox et al., 2022) sought to redefine the conventional paradigms, measuring and mapping mechanisms of the sonic environment, by rendering acoustic science categories of "noise" in terms of daily lived experience rather than through reference to a yearly average and by showing how the sociocultural basis of vulnerability to noise was absent from the data. The combined scientific, anthropological, and artistic perspectives of our collaboration addressed these issues at two levels, firstly by revealing the forms of social life that had developed in response to the daily occurrences of noise, second, by examining how sound resides in the sensory memory of place.

At the first level, which is what I (Rupert Cox) have been referring to in this paper as the level of hearing, these recordings work in a signifying register to describe these forms of social life, through various locales, activities and events across the island of Okinawa, which are linked in one way or another to the operation of these bases and the legacies of the Pacific war which led to their creation. They reveal how the association between aircraft noise and social life is linked to wider debates between national, prefectural, and US military authorities about the dependency on and the resistance to the continued presence and operation of US military bases and about how the Pacific war is remembered. Recordings are important because usually in these debates, connections between Okinawan identities and the sonic environment are represented in acoustic graphs and maps and by analysis of the formation

of social groups that resist these bases and make legal claims to the reclamation of land and compensation. The sound recordings that make up the Okinawa Island Archive formulate these connections in a different way, moving beyond acoustic science approaches to environmental sound as an object of scientific and legal contestation in order to present an interwoven layering of different sonic spaces, events, and behaviors.

The significance of the idea of recordings as a layered ethnography is important because it creates the capacity to understand them as a sensory ethnography and comes from Steven Feld's foundational work among the Kaluli in Papua New Guinea which was developed through further work in the Balkans and Ghana. In these works, resulting in a series of albums (1982a, 1985, 1991, 2001a, 2001b, 2007, 2011) it is not necessarily assumed that one track by itself can carry the ethnographic value of the project but rather that this value is emergent from the conjunctions between three kinds of layers.

The first kind of layering can occur within a track as an "ethno-aesthetic negotiation" in sound engineering "creating space as well as place" by the way that "the time layers and the space layers" are edited together (Feld & Brenneis, 2004, p. 467). For Feld, and sometimes for ourselves, this involved "dialogic editing" (Feld, 1987) with research subjects in the field, spending concentrated time together and sometimes sharing the headphones and microphones so that they could listen to the space we were trying to record and to adjust recording parameters such as the sound levels and microphone set up.

Layering also means thinking about "the meaning of sound in relation to image and text" (Feld & Brenneis, 2004, p. 469). The Okinawa Island Archive is one iteration of this second kind of layering in our collaborative research sitting alongside experiments in film, such as our installation work *The Mouth of the Cave and the Giant Voice* (Cox & Carlyle, 2015). This immersive sound installation resisted pictorial images and voice audio altogether, in favor of a black screen with the text from a conversation with a war-survivor, Yogi-san, rendered on the screen as "image-texts." The conversation was recorded while visiting a cave where he had sheltered during the Battle of Okinawa that led him to recall his wartime experiences (Cox & Carlyle, 2016). The aesthetic strategy used to represent this conversation was designed to draw viewers toward a kind of listening that could engage with the sensory memory of the sounds in a place that were no longer present to be heard but could be evoked by the combination of reading the image-texts that described those sounds and listening to the recordings of the sounds that were present during the occasion of the conversation with Yogi-san.

A second, more recent film *Zawawa: the sound of the sugar cane in the wind* (Cox & Carlyle, 2017) layered sound, image, and text according to a similar design and with the same rationale but was also interspersed with self-made and archival film sequences. It has now been deconstructed and reassembled as an art book, also titled *Zawawa* (Carlyle et al., 2023) designed as a layered and dialogic sequence of dual language texts (in English and Japanese) and images, organized in sonic terms as "reverberations," "resonances," and "reflections."

In the Okinawa Island Archive, the 50 or so hours of different soundtracks are layered into thematic categories with a series of subcategories organized so as to distinguish and group together various tracks, for example, Habitat, Rural and Coast, Scenes from Lagoons, Sunabe Lagoon. This digital architecture for the archive was dictated in large measure by the conventions established by the other sound archives in the collection, such as the well-known "Louis Sarno Archive, Music from the African Rainforest," and the "Mark Slobin Fieldwork Archive, Music from the Afghan North." These archives, like the Okinawan Island Archive, also use images and texts to contextualize the music and do so in a manner that is primarily illustrative. The track is tied to the time and space indicated by the indexicality of

the photograph and the literalness of the text. The example of "Sunabe Lagoon" mentioned earlier demonstrates this. It reads as follows:

> The coral lagoons at Jashiki, a small village in the Kunigami district and at Sunabe located at the end of the Kadena USAF base runway, are still used occasionally by local people to collect sea grasses, crabs, crustaceans, fish and octopus. They have, like all coral reefs in Okinawa, been damaged by coral bleaching. The lagoon at Sunabe which bears the physical traces of the US landings that took place in 1945 is used for recreational fishing. The lagoon at Jashiki is used for wildlife educational tours.

The audio track itself which is the last layer in this chain of categories, is labeled: "Water Lapping Seabirds, C130 Overflight, Super Quiet, September 5 2015." Some of these track details are significant because they indicate notes that the sound recordist, in this case Angus Carlyle, has made about the track just after it has been recorded, either in the field or soon afterward while reviewing the tracks. The track is "Super Quiet," meaning during the recording, the levels were low and that its volume may therefore have to be boosted in post-production, something which involves a change in the digital file size. These technical details tell us something about the transduction of sound energies across recording media and bring us to the third and most profound sense in which recordings can be understood as a layered form of ethnography, because they speak to the nature of sound as resonance, existing at the most fundamental level as a form of vibration.

Resonance is a layer of sound which moves through and resides in the matter of bodies as another material of the environment. This is what I understand Feld to be referring to when he writes of the layers of sound in the Bosavi context as "embodied and emplaced history" (Feld & Brenneis, 2004, p. 468). It is resonance that underpins Stefan Helmreich's argument for a "transductive anthropology" that listens for the distortions and resistances that might reveal the fissures beneath any manifest presence (2015).

The small, seemingly incidental technical details, like "Super Quiet," recorded at the sub-level of track descriptions in the Okinawan Island Archive are productive distortions because they are a way of recognizing the residues of resonance that remain in the media of bodies and digital files. They speak to the potential of layered sound recordings to express the way that sound exists as a memory of the senses where resonance is a felt sense to be listened to rather than simply heard.

The relevance of the fissures beneath the inherent claim of field recordings to self-evident presence, something which is enhanced by the authority bestowed on recordings when they are assembled as an "Archive," are most starkly revealed in this Okinawa Island Archive by the distinction between two types of recordings of habitats. The first type of recording is passive and the tracks are systematically organized as the result of a bioacoustic network of sound recording monitors primarily designed to capture species behavior but which can incidentally record human behavior as well. These recordings, which have been processed by a supercomputer at the Okinawa Institute of Science and Technology provide a different, "more-than-human," species level of understanding of the effects of the bases on the environment of Okinawa.

The bioacoustics environmental recordings in this archive were carried out using automated microphones placed at 24 sites across Okinawa, so they operate without a human to hear and record. Thus, they represent a shift of perspective, from the anthropocentric to the ecocentric. In this context, the sounds of Okinawa's wildlife—primarily insects, frogs, and

birds—appear in the foreground. In the background, aircraft noise joins a chorus of human impacts on Okinawa's soundscapes: road noise, urbanization, habitat degradation, biotic homogenization, and climate change contribute as well. These natural soundscape recordings are important snapshots of the state of Okinawa's environment in the early twenty-first century, a time of rapid development and changing landscapes. In technical terms this "snapshot" takes the form of a preprogramming of the acoustic recorders to record at ten-minute intervals.

On the early morning of October 12, 2019, this took on particular relevance as the three recorders in Sueyoshi park around 1 km away from Shuri castle created an automated acoustic account of the flames, sirens, helicopters and human voices as well as the wildlife disturbances, as it was consumed by fire. These recordings do not form part of the Okinawa Island Archive, but they are revealing of the problem of "presence," because as bio-acoustic recordings analyzed by computer algorithms their capacity to provide insight into a human centered event, is only realized once they are listened to by a human agent and this is not what they are designed for (Vallee, 2018).

The second type of "habitat" recording is by contrast active and participatory and involved myself, Hiramatsu and Carlyle working in places and on features of the environment of Okinawa, as well as that of another Ryukyu island, Ishigaki, which were important to people we interviewed who had been effected by the war and by the presence of US bases. These places are urban and rural and significant in sacred, historical, economic and particularly military terms.

The US air force base at Kadena is the most significant of these sites for the archive because it is where we have spent the most concentrated time, making recordings since the beginning of our research in 2007. It was constructed following the end of the Battle of the Pacific and has been vital to US geopolitical strategies and Japanese security in the Asia Pacific. The loss of communal lands which were forcibly appropriated to create the base and the noise of the aircraft which fly from it are daily reminders for many Okinawans of this postwar history and can stir up painful memories and feelings. The recordings in this section describe the daily occurrences of military overflights from the Kadena base which arrive unexpectedly as flight schedules are not posted. They detail the impact of engine noise from the base when planes are operating and when they are being tested on the ground. They show the radically different sound worlds, created first by the USAF TV and radio broadcasts—indicative of the daily life and concerns of the base community—and in contrast illustrate the vocal protests and songs of citizens' and lawyers' groups contesting the presence and health impacts of the base through a long series of legal claims for compensation.

The signature sound of this base, the sound which defines its fundamental purpose to "put planes in the air"—as the public relations officer of the base put it to me—is the sound of military jets in flight. By number and by length of track, these military overflights comprise the largest proportion of the recordings in the archive. However, in playing the tracks the sounds of the aircraft appear to feature relatively briefly. They arrive suddenly and without warning. Much of what we hear is the waves breaking on the lagoon that lies at the end of the runway, the metal shredders, balers and grabs in a nearby breakers yard, children occasionally playing on the small beach in front of the apartment block for US servicemen adjacent to the lagoon, musical jingles over the loud speakers set up by the local council to demarcate different times of the day. The presence of these sounds can be clearly heard on these recordings, but it is the unexpected arrival of the military fighter planes which can make

us listen into them in ways that give insight into the way that they are experienced by local residents. The sounds of the planes are embedded into this surrounding soundscape, which is permeated by anticipation of their precipitous arrival. The sound of the planes remain in place, even when they are inaudible. This was the major finding of Hiramatsu's epidemiological studies in the 1990s (Hiramatsu et al., 1997, 2002) which documented the various health effects of exposure to this noise and also the result of the recordings that we have layered together in various ways.

Conclusion

The composition and organization of the Okinawa Island Archive, like the conversations and sound walk with Ikeda at Shuri castle, show how a necessary condition for what Erlmann called the "ethnographic ear" (2004) is learning how to listen for the fissures of presence so as to understand the ways in which sound remains. As Jonathan Sterne has written, "thanks to recording, sound exists in the memories of machines and surfaces as well as the memories of people" (2009, p. 57).

The type of research that this essay has described makes a case for the ethnographic insights afforded by a cultivation and representation of listening. These are insights based in a collaboration and a commitment to producing works, such as the sound archive, which are public facing and accessible to a wide audience. The research presented here was not conducted alone, but as part of an interdisciplinary grouping, which required us to learn to listen across our disciplinary boundaries and conventions and to find points of convergence and adaptation between ourselves. This took time and is still an ongoing process, happily unresolved, because we have found it so continuously productive and revelatory. Working as a group we inevitably heard, appreciated, and found ourselves listening in to different sounds in ways that were key to the multisensorialities of our work because we were sharing our sensory engagements. We have found the multisensoriality created by our collaboration productive because it can be represented by the various multimodal forms that we find in the layers of the sound archive, offering routes into these inner dimensions of sound that remains in place beyond the realm of the heard.

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MULTISENSORY STORYTELLING

Inciting polyvocal polemics in applied ethnography

Beth A. Uzwiak

We duck inside Carver's rowhome, greeting neighbors gathered on the front stoop. Inside, Ron—likely the oldest person in the room and still dapper in a faded pinstripe suit—sits next to a plate of hard-boiled eggs. As he rolls one in his palm, he raises his other hand in a slow greeting. PJ signals a hello with a dip of his chin, pulls some beers from a mini fridge and hands them to us without a word. In the back room, a card game progresses. Smoke clings to the ceiling and the TV flashes a rerun of Cagney and Lacey. It's 11 am and we settle back to record a long chat. A local "speakeasy," Carver's serves as a de facto community hub, providing neighbors with free breakfast, entertainment, and a place to harbor from the rough edges of the day.

Carver's is in Strawberry Mansion, a neighborhood in North Philadelphia adjacent to Fairmount Park, one of the largest urban public park systems in the United States. For two years, I conducted ethnography here in collaboration with Amber Art & Design (AAD), a local artist collective. Together, we completed a cultural asset mapping process as part of a creative placemaking project funded by ArtPlace America and administered by Fairmount Park Conservancy (FPC), a local non-profit that stewards the public lands and properties that comprise Fairmount Park. As core points of inquiry, we set out to discover how residents use the park, how this usage has changed in tandem with changes in the neighborhood and citywide, and what residents want to see happen in the park as it and Strawberry Mansion undergo (re)development.

Semi-wild and untamed in places, eastern portions of Fairmount Park that border Strawberry Mansion ribbon with trails and playing fields, hidden groves of pawpaw trees and crumbled foundations made bold with graffiti. This slice of parkland also contains a music venue, a recreation center, and a recently opened nature center. Lenape territory before government entities orchestrated the forced removal of local Indigenous communities, the area became prime real estate for Philadelphia's white colonial elite who built their mansions here above the Schuylkill River.

In 1867, the City of Philadelphia created Fairmount Park Commission to consolidate these private estates into public park land. When the Commission eventually became Fairmount Park Conservancy in 2001, FPC assumed stewardship of some of the remaining

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mansions, including an underutilized property known as Hatfield House located on the periphery of both the park and Strawberry Mansion. FPC selected Hatfield House as site of their partnership with ADD. For two years, we used the house as home base to catalyze relationships with residents in nearby Strawberry Mansion. Through community-sourced events, collaboratively curated exhibits and participatory story collection, we transformed the property into a public platform for experiments in civic engagement. Multisensorial methods challenge the notion that any one sense is productive of knowledge or capable of its representation (Howes, 2019); rather the multisensorial invites participants into an arena of affective possibilities, enabling what Rosabelle Boswell (2017, p. 197) calls "sensuous listening" as an "embodied, dialectical multisensorial process that is also profoundly political." Through participatory experiments (Elliott & Culhane, 2017), we invited residents to see, hear, experience, embody, review, refute, edit, vet, debate and celebrate the data we collected together. We built dialogic elements into how we processed, presented, interpreted, and represented the stories we heard, creating encounters for collaborative sensemaking (Vannini et al., 2012). We developed interactive installations to incite polyvocality, activities in which the self-authorship of embodied life stories offered an opportunity to interact with other histories and experiences, and for recordings and videos to build a cacophony of voices that reverberated rather than contained local "truths" (Feld & Brenneis, 2004).

Hatfield House itself provided an alternative register for place-based meaning-making (Pink, 2009) and memory, assisting possibilities to emerge in the unexpected, encouraging what Hunter et al. (2016, p. 34) term "black placemaking," or "the ability of residents to shift otherwise oppressive geographies of a city to provide sites of play, pleasure, celebration and politics." We emplaced maps and archival images, sound recordings and slideshows in the spaces of the house, encouraging a kind of mimetic intimacy to emerge—an affective opening to experience historic memories as lament and celebration at once. Bedoya (2014, n.p.), expressing Jenny Lee's concept of place*keeping* as a counter to place*making*, emphasizes the distinction of the second as

> not just preserving the facade of the building but also keeping the cultural memories associated with a locale alive . . . a call to hold on to the stories told on the streets by the locals, and to keep the sounds ringing out in a neighborhood populated by musicians who perform at the corner bar or social hall.

Creative placemaking or placekeeping and cultural asset mapping have emerged in the past few decades as part of a constellation of participatory arts-based methods intended to better engage residents in (re)development processes. Rich examples demonstrate that methods like creative placemaking may create dynamics "antithetical to the dominant logics of racialized capitalism," spurring "neighborhood revitalization through alternative entrepreneurship and economic and cultural development projects" (Lipsitz, 2017, p. 44). Reflections by practitioners and artists also suggest that projects may increase the likelihood of racialized displacement and erode existing coalitions even as they strengthen outside interests, including those of private developers (Olsen, 2019; Wilson, 2015).

As an applied researcher, I have found ethnography useful to tease out the complexities of these projects as they unfold, and to reveal the insidious blinkering of neoliberal logics and language in economic (re)development in which ongoing disinvestment is put to use—at times dressing up knowledge extraction in the guise of equity. Ethnographic data nuance the "technocratic optimism" of creative placemaking in which (re)development itself is taken as

a given, a hoped-for outcome that rarely acknowledges or addresses the economic policies that orchestrated the decay and destruction of the built environment that (re)development now seeks to capitalize (Olsen, 2018).

Ethnography also highlights the complexities that arise when funders and institutions conceptualize the built environment as a site of creative experimentation, a laboratory to test ways that local institutions can collaborate with community members (Uzwiak, 2016). Residents who constitute and embody this environment may experience experimentation as another form of extraction, what one participant in this project expressed as "a messing about." Experimentation can interact and intercede with dominant models of neoliberal urbanism in ways that engagement itself becomes handmaiden to commodification in the guise of equitable (re)development. Participation enacted in the name of inclusion can reduce residents into a composite identity ("community").

I have also found that multisensory and arts-based ethnographic methods can work against this reduction (Uzwiak, 2016, 2021). My interest is with how emplaced ethnographic knowledge—"know-how" generated through art practice and multisensory methods (Cox et al., 2016; Schneider & Wright, 2010)—moves within institutional and foundation-funded projects and whether such knowledge can "disrupt" technocratic, white-dominant frameworks (Uzwiak, 2021). I am interested in the potential of collaborative ethnographic placemaking (Pink, 2008) and multisensory storytelling to shift institutional priorities in terms of decision-making: how institutions and funders allocate and spend funds, what they do to create structures that increase parity and interactive accountability with local communities, how they define and measure success.

I approach multisensory storytelling as a "sense-making" activity (Vannini et al., 2012) and stories themselves as "multisensory and locally embedded devices" (Boswell, 2017, p. 194). Sensory ethnography emphasizes a kind of "knowing" (Pink, 2008) that can recuperate hidden stories (Stoller, 1997), especially experiences that public culture renders inaccessible or invisible (Feldman, 1994), including violence and displacement (Daniel, 2002). Michael Jackson (2002, p. 39) suggests that, for ethnographers, storytelling mediates a "contested space of intersubjectivity" where we find the "vital capacity of people to work together to create, share, affirm, and celebrate something that is held in common."

Multisensory storytelling reveals that which is held in common as contested, even as commonality may be honored, treasured, or sought. In this space of contestation, what I refer to in this chapter as a "polyvocal polemic," we find what Kathleen Stewart (1996, p. 5) calls "a place for story" that is "tense, contradictory, dialectic, texted, textured, both practical and imaginary and in-filled with desire." Applied multisensory storytelling that incites polyvocality highlights ruptures, gaps and discord in urban (re)development and in the dominant narratives of urban life upon which they rest. It also produces a critical collectivity in which we can imagine a poetics of place*keeping* that priorities *belonging* as already existent, even if conflicted in meaning and embodiment.

Background: applied sensory epistemologies of engagement

Strawberry Mansion history is breathtaking. Stevie Wonder once performed at the local high school, tossing records to enthralled teens (and teachers). African-American painter John Ossawa Tanner lived here in the 1880s as did the first black diplomat, Ebenezer Basset, who became the fourth US ambassador to Haiti. John Coltrane lived here, as did musicians Dottie Smith and Jill Scott. Rapper Meek Mills and basketball legend Dawn Staley were born

here, and the boxers Muhammad Ali and Joe Frazer once trained on the nearby wooded trails of Fairmount Park.

The Black Panthers headquartered here in the 1960s and residents organized with the NAACP to desegregate nearby Girard College in 1965. In subsequent decades, residents have mobilized in response to relentless economic hardship exacerbated by austerity politics and the daily fallout from over policing and under resourcing. Strawberry Mansion, in the words of one resident, has always been a "neighborhood of protest." These histories remain largely unknown outside of the blocks that shelter them, yet "protest" remains a key feature of the neighborhood. This project came to be, in part, because of resident-led push-back to recent (re)development efforts in areas of East Fairmount Park that border Strawberry Mansion, continuing what we learned was a long practice of civic agitation. "Protest" from Strawberry Mansion residents created what I think of as a "lack of legibility" to the presumed contours of the project and in doing so allowed a complex and nuanced notion of community to emerge.

This project was funded by the Community Development Investments (CDI) program launched in 2015 by ArtPlace America to support organizations in their efforts to sustainably incorporate arts and culture into their "place-based" work. Organizations that participated in this program received technical assistance to conceive, execute, and finance creative placemaking projects aimed at achieving their missions more effectively and to bring about "positive outcomes" for "their communities" (Liu, 2020). As can be typical in creative placemaking projects, FPC selected to partner with local community-based artists to facilitate participatory interactions with residents, and to use creative strategies to document residents' interests and needs. They selected AAD in part because of their long-standing ties to Strawberry Mansion; in turn, AAD brought me into their work because of prior collaborations with place-based projects in adjacent neighborhoods and a shared interest in experimental methods that engage ethnography and art practice to advance equity.

The notion of artists and community-based researchers as intermediaries between institutions, local entities, and residents may signal existing antagonism or at the least estrangement between local organizations and residents (Langlois, 2020). It also, in my mind, signals the complexity of such projects as they thread with the tensions of ambitious and at times contradictory goals. For example, FPC's priority for cultural asset mapping was creative documentation of the neighborhood that would result in a final product for dissemination and circulation (Liu, 2020, p. 4). Often, asset mapping is intended as a kind of needs assessment, identifying existing resources in the built environment that can be leveraged to reach community-defined goals, such as improving playgrounds or increasing access to healthy foods. As the artist/researcher team, however, we positioned cultural asset mapping as part of a broader ethnographic project that included participatory data collection and event planning to invigorate existing community networks and direct resources into them. AAD dubbed their time at the Hatfield to be a "community catalyst residency" that prioritized an unfolding process over predetermined production (O'Connell et al., 2019).

Throughout the project, we also collaborated with a neighborhood advisory committee comprised of longtime residents and others working in the neighborhood, often with civic associations or local non-profits. This group was vital in providing direct feedback to the institution, insisting on parity every step of the way including financial transparency (revealing the project budget), compensation (paying them and other participants), and creating paid opportunities (a stipend for local youth internships, for example). The neighborhood advisory committee comprised its own politics and priorities that were not synonymous with

the neighborhood at large, although this is what they were tasked with doing (signaling the trouble with assuming community to be a monolith). Part of our brokerage included collaborating with the institution, the neighborhood advisory committee and other participants while nuancing conceptions of the neighborhood, even for those who were lifelong residents.

Below I touch upon a few sensory methods that expanded capacity for voice and engagement, including what I call "stoop speakeasies" and "walking laments." I consider how these methods in and of themselves constituted a form of placemaking (Pink, 2008) and informed the development of a deck of playing cards, as well as multisensory installations created part of events at the Hatfield House. I use these examples to touch on the complexities of creative placemaking as a tool of urban (re)development and what sensory methods can reveal (and do) about "human relations in a socially unequal space" (Boswell & Nyamnjoh, 2016, p. 9) such as the one that typically exists between institutions and residents in these projects. In doing so, I echo Roberto Bedoya's (2013, n.p.) insistence that

> whether one is engaged with Creative Placemaking practices as an artist, funder, developer, NGO, or governmental agency . . . one needs to reflect upon US history and its troubling legacy of "placemaking" manifested in acts of displacement, removal, and containment.

Multisensory methods

Stoop speakeasies

We sit on Carver's stoop and circulate a few hand-drawn maps to ask if anyone can describe the contours and content of the surrounding blocks and how they have changed. Some older neighbors, like Ron, spend many hours at Carver's and love to swap stories about the "paradise" days when the streets were lush with fruit trees and local businesses included hat shops, clothing stores and candy counters. An amicable argument erupts: What was next to the florist shop in the 1970s? Was it a butcher, or a delicatessen? I record the debate.

A local photographer joins us as we photograph and video and audio record conversations with neighbors in what I call here "stoop speakeasies." We move from Carver's to linger on nearby front porches and sidewalks, and step inside kitchens for coffee to catch up on local events, to gossip, to "shoot the shit" about who has moved out and who has moved in. Residents gift us their stories in memories, expressed in the stuttering movement of daily life and in dialogue and disagreement with other neighbors. Neighbors yell across the street to one another, asking what others remember, what they have heard. As we ebb and flow from stoop to stoop, children come and go, running off when the conversation frays into debate.

Through stoop speakeasies, we meet many longtime residents of Strawberry Mansion who were born in the neighborhood or moved there as children as part of the second wave of the Great Migration of African Americans from the rural south to cities in the north. Families came in search of employment, home-ownership and quality schools. Clarence, a resident in his 70s, explained:

> During that time (the 1950s), a number of professional Blacks were moving into Strawberry Mansion. On our street where I grew up, there was a high school principal, there were administrators in the court system, there were school teachers, then you had postal workers.

We learn from residents that before white flight created de facto racial segregation, these newcomers joined a thriving middle-income community, often working for local Jewish-owned businesses before opening their own establishments. Before deindustrialization gutted local blue-collar jobs, a string of factories within easy walking distance provided a source of steady employment. Before austerity policies slashed funding for public amenities in the 1980s, boundaries between the neighborhood and Fairmount Park were porous; the park well-tended, well-lit and with robust free and low-cost programs for youth and adults alike.

Now Carver's block is like a grimace after a boxing match—punched-out teeth former homes and businesses torn down by the City of Philadelphia during its "blight removal" program of the early 2000s. The terms "vacant" or "abandoned," often used to describe such land parcels, are misleading. Where buildings once stood, some community spaces have grown: a half-cylinder barbecue and lawn chairs used in the warmer months, an improvised playground, a glut of gardenias, a quarter-acre of collards. Carver's, too, still stands. In the destruction of the build environment, in the gutting of city funding for safe spaces such as playgrounds, schools, and recreations centers, in the shuttering of locally owned businesses, restaurants and bars, Carver's stands: an oasis.

Yet even Carver eyes new (re)development with a wary shake of his head. While we record residents' stories, their lives lived through decades of declining resources, developers break ground on new construction. We listen as they transform long-empty factories into condominiums and establish coffee shops and breweries at street level. We watch as they as gut and rebuild houses that have been empty for decades. The concern with (re)development, according to some residents, is not that new businesses might open in the neighborhood or that white people may move in; the neighborhood was for a brief time racially and economically integrated and once sustained many businesses which made it both vibrant and self-sufficient. Their concern, rather, is that gentrification will intentionally displace long-term black residents. As one resident explained,

> people in this community believe that the neighborhood was left to deteriorate so that other folks can come in and claim it. It's sort of like a "here we go again." We're gonna get pushed down and pushed around and bullied into someplace else that we may not necessarily want to be.

Walking laments

We leave Carver's stoop and follow our typical loop through the neighborhood. We pause to watch contractors throw shingles on a new roof. Dust clots then disperses and paints the background of our photos and videos in a grainy brown hue. We note which lots have new construction, record piles of housing materials, listen to the guttural rip of a backhoe. We walk past the stables and field where Fletcher Street Urban Riding Club has long pastured their horses. The unexpected grass throws a sharp smell against the ever-present tang from oil and rubber tires, stacked in tumbled piles in front of the gas station. We stop by an after-school youth program and the local civic association to recruit young people for an upcoming "audiovisual and photo-based summer camp." Our final stop for the day is outside the auto-repair shop where we hand out flyers for our upcoming event at the Hatfield House which will include a showcase of local barbers providing free trim-ups, a poetry and spoken-word showcase and local eats.

As we walk, we listen to memories of what was—the corner where a beloved playground once held shouting children; the basement bar that was *the* place to be in 1978; the stoop where residents gathered to hear the notes of John Coltrane's saxophone on a Sunday afternoon; the ceramics program once held at the recreation center; the man who taught horseback riding in the park; the grove of apple trees torn down in the 1980s; the spot where a life ended in 1997. As we walk, we also listen to what *is*: neighbors unable to afford recent tax increases or housing repairs who have sold their homes to developers and left; the public school slated to close the following year; the corner store that was once a robust greengrocer and is now the only place to buy fruit in a five-block radius; the frame of a new greenhouse that a local non-profit built adjacent to a community garden; the still-operating barber shop where Muhammed Ali once got his hair cut.

These wanderings—what I term "walking laments"—embody the grieving and honoring of the past even as residents dream and conjure. In addition, the actualization of complex lives, we record a kind of mourning, a keening in response to daily hardship and violence: grief from the days and lives stolen because of over-policing and under-resourcing, rage from the drain of possibility despite decades of protest, exhaustion from economic precarity and the violent intrusion of the carceral state into family life, and a profound suspicion of "outsiders," including FPC and the engagement efforts that we were leading. Many older participants also expressed a fear that younger generations did not know their stories, and that their experiences of the neighborhood would be lost with new people moving in.

Our "walking laments" became ever-widening and shifting grooves, tracks we laid so that neighbors would recognize us coming, would trust that we would return (Pink, 2021). Through walking, we emplaced our bodies in an ongoing dialogue with local experiences of social life. We captured voices in discourse, in grief, in celebration and laughing debate, in complaint. These polysensory (Pink, 2009) in situ (Degen & Rose, 2012) encounters mingled past memories into present-day encounters (Imai, 2010), illuminating residents' conflicted experiences of place and history (Low, 2015). What emerged was an unabashed celebration of the neighborhood that simultaneously embedded critique: a polyvocal polemic I came to recognize as a continuation of the neighborhood's "community of protest."

Life stories and intergenerational dialogues

From stoop speakeasies and walking laments, we began a life story collection process because participants asked us for more formal recordings of local histories. In addition to recording residents' stories on their front stoops and in their kitchens and living rooms, we invited residents to the Hatfield House to be both video and audio recorded. Participants included artists, activists, musicians, non-profit workers, healthcare workers, and members of local organizations, many whom also collaborated with us to curate, design, exhibit, and perform as part of the events we were simultaneously co-developing at the Hatfield House.

To create intergenerational knowledge exchange, we also recorded roundtable discussions and community meetings, and collaborated with a local youth organization to teach students to facilitate peer-led focus groups, peer-interviews and cross-generational dialogues. We retained our voices in these recordings, asking questions in the context of daily life. With the direction of a local sound engineer who DJ'd our events, we edited clips of these recordings into audio tracks, later used in participatory sensemaking activities and installations at Hatfield House.

I also transcribed and coded recorded stories to compile a textual and visual historical timeline, annotated with participant quotes and archival photographs of the neighborhood. We circulated the historical timeline to participants and other residents for collaborative editing, hosted interactive data editing parties, and, over several months, developed a robust list of "cultural assets." These assets were, by in large, historical figures and places that were part of the living memory of the neighborhood, rather than contemporary features of the built environment.

I used this timeline and cultural asset list to create a curriculum for a local youth summer camp during which students learned how to use digital cameras, video cameras and audio recording devices. During the six-week program, youth participated in walks through the neighborhood to document and explore local life, led by a local teaching artist and a long-time resident who provided historical information and stories about the local places they visited. At the conclusion of the camp, youth curated and installed an exhibit of photos and videos at Hatfield House and created recording stations for family and friends to react to the photographs and record memories of the neighborhood.

Polyvocal polemic(s)

Together, stories highlighted myriad concerns of neighbors, from struggles with housing insecurity and underemployment to a lack of safe community spaces. Despite these and other consequences from decades of racialized disinvestment and discrimination, many participants vehemently refuted any negative descriptors of the neighborhood or their own experiences. Some participants insisted that terms often used to describe people living in the neighborhood—specifically "marginalized," and "disadvantaged"—largely ignore community activities, local activism, or simply the everyday ways that people make meaning in their lives. In one conversation, two residents argued over the term "resilient," one suggesting that the term is a way of excusing the burdens of oppression and racism that many residents in the neighborhood have experienced: "being resilient," they insisted, implies that people have an inherent capacity to survive policies meant to disadvantage them.

Community stories surfaced local struggles; participants agreed with the findings but asked us to present the data "in a positive light"—for example, to turn hardship into a request for change rather than a list of complaints. In one instance, we used data to generate a list of specific priorities for park improvements, including better lighting, better access to picnic permits, hiring locals to run programming, and the construction and maintenance of safe bathrooms. In another instance, we collaborated with the advisory board and FPC to develop workshops at the Hatfield House about housing: how to secure legal title to inherited homes, how to weatherproof houses and complete simple repairs, how to get assistance with paying utility bills.

As participants shared their thoughts about typical outside characterizations of the neighborhood, they voiced fears that we, too, would neglect to bring nuance and celebration to their lived histories. In doing so, they tasked us with engaging a polemic: representing the decades-long impact of discriminatory policies, spatialized economic dispossession and city abandonment without furthering impressions of the neighborhood and its inhabitants as "depraved"—and to do this while simultaneously centering residents' at times divergent authorships of meaning and significance. Refuting the legibility of the project's presumed terms of engagement made room for irreverence, humor, play, discord, and disagreement as a natural outcome of things (Stewart, 2007). It also held us accountable to the neighborhood's

complex history of civic agitation as well as our roles as engaged listeners able to "listen to sense" (Boswell, 2017).

Playing cards

As one of the agreed-upon deliverables of their contract, AAD was to create an art product from the cultural asset mapping process. Yet our data and the "protest" of participants resisted the notion of creating an actual map of the neighborhood. Participants expressed conflicting opinions about what should be included this potential map and worried how the map might be viewed by outsiders—rendering assets legible and thus consumable. The biggest worry, however, was how a map could capture assets that were not part of the built environment or were no longer there. They also wanted something that would prioritize people, living and dead, as the neighborhood's most important asset.

Through weeks of interactive debate, we grew my idea of creating a deck of playing cards that, through its materiality, would encourage storytelling and playful interaction. We whittled down our list of assets to 52 and divided the list into four suits: sports figures and places (spades); musicians (hearts); activists, leaders, and organizations (diamonds); people and places of cultural significance (clubs). We then supported a local designer to lay-out the cards using community-sourced images and text. The layouts were circulated, and though a lengthy and at times conflicted process, finally approved and printed. We distributed decks to all participants and at venues and events throughout the neighborhood.

Multisensorial installations

It's our fourth event at the Hatfield House and the boards on the front porch crack with the movement of bodies. We dip and sway as we stutter through the improvised dance floor and into the living room where the DJ spins records in the pulse of orange–green–red light. Children squeal, grab hands and pull each other to the snack table and help themselves to mac-n-cheese. In the front room, adults gather with steaming plates in hand around the large map of the neighborhood we pasted on the wall, placing dots on areas of the map that have meaning or memory, color coding the blocks: green (community); red (stress); orange (change); blue (comfort); purple (strength); pink (home). Two women bend and hoot with laughter as they recall high school hi-jinxes. Some write notes on a poster placed alongside the map, while others whisper stories into old cell-phones used as digital recorders.

The conga line makes its way upstairs and into the back room, where face- and shirt-painting activities are underway. The front room is empty of everything but a mess of chairs and a speaker. From the speaker comes an argument: two neighbors swapping opinions about the new bird sanctuary in the park. The soundscape then shifts into a story about wild parties that a longtime resident once hosted at her house, and the basement speakeasy where artists, poets and activists gathered in the 1980s and 1990s. Several people sit as if mesmerized, listening as the story soundscape shifts to a recollection about searching for the "green lady," a spirit that some believe lives in the park.

From the upstairs window, I see families tearing about the lawn, caught in a game of tag as fireflies flicker. I glance at the shadows held temporarily at bay then run to rejoin the conga line as it threads downstairs. I slip outside and sit on the front stoop as neighbors settle in lawn chairs. We crack open a box of our newly minted playing cards and begin a game of Spades. Neighbors nod as the cards flip up images: Florie Dotson, a community organizer;

Dr. Ethel Allen, a physician and politician who was the first African-American woman to serve on Philadelphia City Council; Ronald "Flip" Murray, a professional basketball player; Philly Joe Jones, a jazz drummer who toured with Miles Davis.

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It's our final event at the Hatfield House. We have curated what we call a "memory house": a multisensory installation of participatory story*sharing* and story*making* activities. Upstairs, a projector hums, transforming still photographs into a loop. The loop shuffles images we took during our walking laments and events at Hatfield House, photos of the neighborhood and of community events that participants shared with us, and archival images we collected from local repositories, including city archives and local historical societies. The room is small and participants cram into two half-circles of chairs in the back corner. One person is shouting at the screen, while another person gestures in front of the projector, his shadow cast into the image. Laughing and yelling, they tell each other how old the other person looks in the photographs.

In the room next door, a digital projector throws a video on the wall, edited together from clips that students created during the summer's audiovisual camp. In the corner, two teenagers lead a discussion group with younger children. They glance up as the video bathes them in purple light, and gesture to the playground currently on the screen. We have created listening booths for audio content that may have violent or otherwise upsetting elements. Some participants choose to put on headphones to listen to stories, including clips from a round table with students during which they shared fears of gun violence and experiences with death and the incarceration of family members. Others choose not to listen at this time. In the hall, we hung photographs taken by local youth. One catches two girls mid-jump, both laughing. A second captures cherry tomatoes against a chain link fence; a third, a hand twirling a purple morning glory flower.

Concluding thoughts: refuting legibility

Multisensory methods encourage a kind of storytelling in which bodily and ritual interactions become historicized (Stoller, 1997) and transformed in the spaces between personal memories and collective histories (Lambek, 2002). Multisensory story*gathering* and story*sharing* offer what Seremetakis (1994, p. 7) calls a "sensory horizon," or a moment that brings the past into the present as a new event that can produce social and historical reflexivity. The sensory horizon of creative placekeeping is ever-moving, and productive of dissonance as much as resonance. Even as the built environment shapes and in many ways determines lives, it cannot fully contain them. There are memories, there are dreams, there are escapes, there are returns, there are possibilities (Stewart, 1996).

In this project, multisensory experiments with stories provoked a polyvocality that dislodged any contained notion of community history, continuing Strawberry Mansion's long held view of itself as a "neighborhood of protest." Participants' polyvocality refuted "outside" interpretations of the community just as their polemical interpretations challenged the presumed goal of the project as rendering local histories legible to others. Sensory methods as participatory experiments (Elliott & Culhane, 2017) can agitate against the notion that community participation in (re)development projects must originate within and be stewarded by an institution, a grant-funded initiative, or trained urban planners. Sensory methods

may offer a way to question the (colonialist) norms of knowledge production in grant-funded applied work inasmuch as they can in academic fieldwork (Uzwiak & Bowles, 2021).

Multisensory methods may also counter the "vision of the city as a product of experts," encouraging institutions to understand "community" as an environment "formed by social histories and practice, often complex and often contradictory in action" (Olsen, 2018, p. 274). Sensory moments, in turn, acknowledge what Stewart (1996, p. 58) calls the cultural poetics of "being at home in a place that actively surrounds, impacts, and remembers." Story fragments—auditory clips, photos, videos, in-time memories, and (counter) mappings—reform and retell stories in action (Minh-Ha, 1991). Here, we find sensory methods attuned to the imaginary and the yet-to-be even as they surface the mourning laments of what has been lost and what has been taken (Stewart, 2011).

As an applied researcher, I have become less interested in storytelling as creative documentation or the ways in which sensory methods can render lived experience legible: accessible, understandable and thus consumable—to whom? I am less interested in how we, as ethnographers, understand the senses *as* data, and more interested in ways that multisensory methods can activate an affective polyvocality and, in this case, contest bounded and thus consumable notions of community that persist in (re)development work.

This interest in the excesses of storytelling (Taussig, 1993) certainly doesn't preclude applying sensory data to develop solutions and redirect resources through institutional accountability, as this project did in small ways. Yet, I am equally attuned to the richly layered, embodied messiness such methods evoke—the shouting over, the laughing, the arguing, the coming and going, the unsettled and unsettling movement they inspire as generative in and of itself (Berlant & Stewart, 2019, p. 34). The (applied) ethnographic project, as it were, becomes not only to improve material conditions, but to enlarge our shared capacities to experience and embody the world in new ways (Jackson, 2007).

It remains crucial to ask what we do with excavated memories and to ask storymakers what they want to be done with them. Pink (2021) suggests that mobilizing "sensory knowing" in applied research contexts can create imaginings of the future, an evocation of shared possibility rather than a prediction. Sensory knowing is perhaps akin to Jackson's (2007, p. xii) "thinking poetically" as "a way of keeping alive a sense of what it means to live in the world one struggles to understand, rather than to treat that world as a text or abstract object of contemplation." The poetry of applied sensory methods in creative place*keeping*, and thus within the institutional logics of urban (re)development, lies in their refutation of tracking and mapping solutions *on* to places; rather they reveal places and the people who live there as *already* reverberating with meanings (Berlant & Stewart, 2019; Hurston, 2001) and orient us toward possibilities as emerging from the polemical.

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35

REFRAMING DEAFNESS

Vision as fieldwork method and documentary art

Andrew Irving

Forms of life

"One of the most significant facts about us may finally be that we all begin with the natural equipment to live a thousand kinds of life but end up in the end having lived only one" (Geertz, 1973, p. 45). Given by "natural equipment" Geertz is referencing the human body and its specific capacities for perception, movement, and interaction, then beyond notions of shared human phylogeny, his statement can be extended to understand how people's sensory lifeworlds are shaped by the combined contingencies of the body one is born with, one's land of birth and one's parents economic status. Put another way, the life someone lives, including their embodied sensory experience of vision, sound, taste, touch, and the other senses, emerges within a specific *form of life* (Wittgenstein, 2009). For our present purposes, a *form of life* can be understood as the collective social practices and linguistic interactions that establish the conditions for being, knowledge, and expression, including the development of sensory perception, cognition, and language within a given environment. This situates a person in history, society, and language but does not accord these the status of determining agents that define a person's life and experience.

A deaf child is born into a *form of life* whose social, cultural, and moral constitution is based on the sensory capacity for hearing and hearing-based modes of socializing, interacting, and learning. Being born or becoming deaf in a world in which deaf persons are routinely excluded from most social and linguistic interactions, impacts on social relations, knowledge acquisition, and learning. Significantly, over 90% of deaf children have hearing parents, meaning most parents have little experience of deafness and cannot communicate effectively in sign language with their children, including during the crucial years of early language acquisition, cognitive development, and identity formation (Young et al., 2019).

Language is grounded in the senses, typically sound and vision, but also touch, for example, braille or deafblind manual. It cannot be learnt through occasional periods of engagement but requires ongoing sensory exposure, immersion, and interaction (Spitz & Kegl, 2018). Many deaf children will not have deaf children or adults in their kinship or preschool networks with whom they can socialize and interact, and are excluded from much of the informal learning that takes place by being surrounded by the general conversation and

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Figure 35.1 "Studying Hard," KwaVulindelebe, South Africa.

linguistic interactions of social life. Given language "mediates and underlies nearly every human activity" (Gulati, 2018, p. 25), the resulting social and linguistic isolation encompasses a broad range of existential, emotional, and cognitive impacts that have lifelong consequences. Despite a similar distribution of intelligence to hearing children, physical and mental health, education and employment, life expectancy, social activities, and citizenship are all significantly affected compared to the general population (Young et al., 2019).

Deafness is a global phenomenon but is unequally distributed with approximately 80% of deaf persons residing in low-income countries. Differential access to medical treatments, economic resources, and specialized deaf learning environments reinforces social, educational, and health inequalities while producing new ones. As Ladd (2003) highlights, colonization continues to shape deaf people's experiences given most deaf people not only live in former colonies but are subject to the practices, conventions, and values of a hearing world in which vision orientated communicative practices are frequently marginalized and at times prohibited or punished. The substantial difficulties involved in learning, communicating, and interacting through dominant modes of expression predicated on the sensory capacity of being able to hear not only presents ongoing challenges but creates essentialized categories in terms of deaf ways of being.

Deaf people's sensory experience is frequently understood as the *lack* or *absence* of hearing rather than in relation to deaf people's own phenomenological and lived realities. In response, and following Friedner and Kusters's call to move away from existing, essentialized notions "of deaf and hearing people's biological and sensory practices" (2020, p. 33) to explore what it means to "inhabit the world through differential sensory configurations" (2020, p. 32), this chapter aims to conceptualize the sensorial and phenomenological lifeworlds of being deaf not as the lack and absence of sound but as an embodied site of sensorial richness and completeness. Friedner and Kusters critique widely held assumptions that deaf

people live a "silent existence"—not simply because many deaf persons have some access to sound or experience sound waves through vibration—but because the eye imparts sound-based knowledge and information to deaf persons. From an experiential and phenomenological perspective, the world is not experienced as silence or through the lack of sound but through a multifaceted sensorial *presence* as disclosed through vision, touch, texture and much else besides.

The idea that vision incorporates the other senses has a long history from Aristotle to Descartes to Mulvey. Merleau-Ponty described vision as a variant of tactile perception and palpitation of the eye whereby the visible is experienced as "something that comes to touch lightly" (1968, p. 132). The intersensorial dimensions of vision (Howes, 2005) are felt throughout the nervous system and body: a graphic example being watching an eyeball being sliced by a razor in Buñuel and Dali's *Un Chien Andalou* (1929) or seeing a close-up of Marina Abramovic's tears and contorted face while eating a raw onion (*The Onion*, 1996). Through such acts of looking, nerve cells across different sensory fields are connected, moving us beyond the compartmentalization of sensorial experiences into separate domains (Friedner & Kusters, 2020), inviting a critical rethinking of how categorical identities and personhood emerge and are entrenched through perceived incapacities (Ginsburg & Rapp, 2017).

Adventures in vision

The epistemological and practical objective of this chapter is to explore vision not just as a means for seeing, sensing, and perceiving the world but as a mode of embodied activity and expression though which personhood, experience, and knowledge are articulated. Based on a practice-based research project and photography and filmmaking workshops undertaken over the course of a year with deaf children and young people across six schools in Soweto and Durban, this chapter considers how a deaf informed visual orientation to the world offers an alternative means of researching and representing a diversity of issues—from the most playful to the most challenging of subjects and injustices—to facilitate new understandings of society, personhood, and the body. Entitled *Enhancing Resilience among Deaf Youth* the research project was a collaboration between the *Granada Centre for Visual Anthropology* and *Social Research with Deaf People* (both University of Manchester) and the *Centre of Deaf Studies* (University of Witwatersrand). The project consisted of a multidisciplinary team of hearing and deaf people who combined to address a set of interests, social issues and challenges pertaining to deaf young people's lives through the strategic use of photography and film: both as a means of situating deaf young people within their own sensory lifeworlds but also for countering dominant ideas concerning the phenomenology of deafness as the absence or lack of sound.

Vision-based interactive, guided, and peer learning workshops of increasing complexity were developed and delivered over the 12 months, to address specific areas of learning, social understanding, or critical areas of cognitive development and to make interventions into the school curriculum that might otherwise be difficult to achieve, offering an effective and inclusive pedagogy for developing knowledge and critical thinking. The workshops involved simultaneously interacting in different visual registers and languages, including English, Zulu, Xhosa, British, and South African sign-languages, and lip-reading. The deaf young people who took part became outstanding creative practitioners who used photography and film to inquire into and represent a diversity of subjects. Importantly, by the end of the

project, the workshops were being entirely led by deaf persons. The young people's work was exhibited in leading international galleries and museums, including the Centre for Deaf Studies (Johannesburg) and KwaZulu Natal Society of the Arts Gallery (Durban). Due to COVID-19, exhibitions at New York's Children's Museum of the Arts and the Whitworth art gallery, Manchester, were unfortunately canceled.

Specific themes and questions emerged through the processes of learning photography and film—including some that may not have been arrived at through other kinds of pedagogical activity or which were identified by the young people themselves through the practice of image making—concerning how deaf persons come to learn about themselves, other people, and the surrounding society. This included exploring the implicit, intangible, and moral dimensions of social life that shape people's perceptions and interactions but are commonly learnt or communicated through spoken language, background conversation, and hearing. Key questions concerned the contexts in which young people realize and understand themselves as deaf and negotiate their identity in wider society, and how deaf young people understand and respond to their own and other people's feelings and emotions in the absence of a referential vocabulary.

These are profoundly anthropological questions that concern the very essence of what it means to be included in a *form of life*, rather than be excluded from it. They are questions about the processes through which personhood is understood, accorded, and recognized, about the shared capacity to sense the world, to use signs and symbols and to form complex social relations in the context of negotiating linguistic and bodily difference. Significantly, they are questions about the common and different ways children and young people, including deaf young people, learn about, understand, and orientate themselves toward their being-in-the-world, *visually*.

From a distance, it might seem that the answer to some of these questions rests with the idea of a world that is encountered, experienced, and understood in a similar way to hearing young people and society, only in the absence of sound. To assert such is not just erroneous but dangerously so because it perpetuates certain stereotypical misunderstandings about deaf ways of thinking and being. In counterpoint, the project below *begins* with the possibilities and practices of film and photography as means of foregrounding the visual lifeworlds and knowledge of deaf young people rather than being a means of representing and documenting them. In the interests of space and consistency, the selection below derives from a specific series of workshops delivered to five different schools on *the experience and expression of emotion*.

All photographs and film clips throughout this chapter were taken by deaf elementary and secondary school children as part of the workshops.

Adventures in image

The photograph above "*Barriers*" was taken by pupils at Sizwile Secondary School, Soweto in response to a workshop developed around the question "*How would you describe your experience of being deaf to hearing people?*" (see also Irving, 2011, 2017). The workshops employed a collaborative approach to image making aimed at enabling pupils to act as subjects of their own inquiry rather than recipients of information. An important pedagogical aim when designing these workshops concerned using visual practice to address themes of identity, self-understanding, and theory of mind. In doing so, photographic practices offered a visual means through which pupils could identify, work out, and represent experiences,

Figure 35.2 "*Barriers*," Soweto, South Africa.

questions, and issues relevant to their ongoing social lives. Organized into multiple teams of around four pupils, each team selected a range of life experiences, ideas, and emotions they thought would communicate to people who may be living in very different social, cultural, and economic contexts. As such, "*Barriers*" aims to build a visual bridge between deaf people's everyday embodied experiences and an unknown audience of imagined others.

Gulati (2018) relates how linguistic exclusion among deaf people impacts on self and agency. The young people use the fence surrounding their school as a visual metaphor and metonym to bring to life their sense of self and the social, economic, and linguistic barriers they face on a daily basis. Their eyes look up and out toward the social world from which they are routinely excluded, rather than down in despondency. The hands are carefully positioned in the foreground to show how hands, like eyes, are a medium of communication, knowledge, and identity for deaf people, and how eyes and hands combine and work together as channels of communication in sign language. Looking out through the fence to society, the young people remain open to the world and would like to be seen, inviting others to look in and recognize their personhood and resilience. Through visual means, rather than language, the photograph generates the possibility for mutual understanding and exchange, that is, a space "of shared interest," which is "never simply a matter of creating either personal or social meanings, but an aspect of the 'subjective in-between'" (Jackson, 2002, p. 11).

"*Swag*" is the accompanying image taken to sit alongside "*Barriers*." It aims to provide a different perspective on the same question "*How would you describe your experience of being deaf to a hearing person?*" by communicating through the body, posture, and positioning, a confidence and solidarity in deaf identity. The image employs Johannes Itten's contrasts in its use of counterpoint and balance. For example, the bodies are arranged along a line of Euclidean perspective—and in relation to the direction of the sun—so that their shadows are in precise alignment. Itten taught at the Bauhaus and devised a system of contrasting properties

Figure 35.3 "Swag," Soweto, South Africa.

based on shape, texture, color, and sensorial perception to be incorporated into the making of furniture, architecture, painting and sculpture. His contrasts included (to give just some examples), *much/little*; *liquid/solid*; *sweet/sour*; *loud/soft*; *strong/weak*; *smooth/rough*; *pointed/blunt*, which were designed to work with and across different registers of sensory perception and sensation.

Itten's system involved approaching the contrast in question from three practical perspectives as follows:

1 Experience the contrast with the senses
2 Objectivize the contrast intellectually
3 Realize the contrast synthetically

In other words, the process is, *first*, to experience and embody the sensation of the contrast in question, *second*, to reflect on the feeling it generates and think about how to incorporate and externalize this feeling into a piece of work (e.g., furniture, painting or building), and, *third*, to realize it practically into the actual work itself.

For the above workshops, Itten's contrasts were adapted for photography and filmmaking by taking pupils through different levels of complexity though play, experimentation, and guided learning. In "*Swag*" the presence of Itten's contrasts can be discerned in the positioning of the three subjects in a straight line (line/body), the posture and comportment of the bodies (stasis/movement) and their strategic alignment in relation to the bend of the road (straight/curved). An aesthetic balance of the dominant contrasting property of the image (diagonal/circular) is achieved in the way it organizes visual attention: first moving the eye in a straight line by following the bodies across a diagonal from right to left and from the front to back of the image, and second by the contrasting placement of the bodies on the bend

Figure 35.4 "My Friend," KwaVulindelebe, South Africa.

in the road, which moves the eye in a circular motion from left to right (for further discussion on eye movement and art, see Yarbus, 1967; Irving, 2017, for more on Itten's teaching approach to design see Itten, 1975).

In John Berger's *A Fortunate Man*, a work which combines photography and storytelling to represent the daily life of an English country doctor, Berger describes how there is a particular "bend in the river which often reminds the doctor of his failure" (1997, p. 23). The bend possesses no shared, fixed, or social meaning that equates "bend" with "failure," and as such opens the possibility of a type of free play of signification and association for subject and audience. Similarly, the bend in "*Swag*" can be read by the audience in multiple ways, including showing how everyday life and the challenges it presents is never straightforward for a deaf young person.

Figure 35.4 was taken as part of a series of workshops with elementary school children, aged between eight and 12, on emotion and expression, and derives from a visual exercise aimed at representing the emotion of "friendship" in a single photograph. The workshops were designed as means for elementary age children to identify, comprehend, and communicate emotion, given their shared history of linguistic delay and isolation. The close and complicated relationship between the embodied experience of emotion and language as a means of naming, conceptualizing, and expressing emotion, is foundational to what it means to be human. Many of the children grew up with little exposure to sign language or other deaf persons, leading to significant social isolation and linguistic impacts. As such many of the elementary school children had limited vocabulary, grammar, and syntax, including for identifying, naming, and articulating the emotions that shaped their everyday experience and understanding of themselves and other people.

Emotions are experienced, expressed, and encountered in different personal and social contexts, and are learnt about, categorized, and understood through language and

intersubjective exchanges with others. Moreover, the role of language is not only significant in learning about, processing and understanding one's own or other people's emotional states but is central to the development of theory of mind, reflective consciousness, and social interaction (Morgan & Kegl, 2006). Growing up deaf in contexts where there is limited exposure to language, means that embodied emotional states, feelings, and sensations may have no linguistic referent, making the interpretation, evaluation, and understanding of both emergent and more defined emotions difficult. Without a linguistic or intersubjective means for understanding different emotional states, it is not just the lack of categories, vocabulary, and conceptual terms that impacts the development of cognition but the absence of any shared frames of reference.

The workshops on emotion and expression developed a range of visual exercises that sought to address the relationship between body, emotion, and other persons, by focusing on how to understand and represent one's friends and classmates. The knowledge that a broad range of emotional states, whether positive, negative, or ambiguous, are a characteristic shared by other people and that one is not alone or isolated in feeling a particular way, is important in terms of theory of mind, social relations, and self-understanding. The first technique was *performative* whereby, having myself given an example, each of the children was asked to "enact" their friend, as if they were inhabiting their friend's body while performing their mannerisms, expressions, and ways of moving, to facilitate an intersubjective and intercorporeal understanding through movement and mimesis. The second technique was based on *relational and associative thinking* whereby children were asked to identify and make associations between their friend and the surrounding world to give a sense of their friend's character by portraying them in relation to different environments or objects. As such, through the camera lens they explored and experimented with different expressive actions and juxtapositions: from being portrayed climbing a tree to sitting studiously at a desk. By forming relations between body and world, the idea was to create a photographic portrait to show the character of their friend and the emotion of friendship, to creatively explore their perceptions of themselves, others, and the environment.

The composition of the photograph above, "*My Friend*" demonstrates a substantial intelligence at work in the creative and aesthetic construction of an image that evokes the emotions and feelings of "friendship." Pay attention to the arrangement of hands. The right hand is signing "I love you" to his friend (the photographer), while the left hand is strategically held behind the back, hidden from view so as not to distract the eye. This is of particular importance as hands convey language and meaning, and a casual or indiscriminate arrangement of the fingers can be experienced as the equivalent of "noise."

The two photographers then switched roles so that the photographer of Figure 35.4 is now the subject of Figure 35.5. "*Distant Hands*" offers a wonderful aesthetic counterpart to the previous image to reinforce the emotional closeness of friendship though employing a sense of distance that is not the opposite of proximity (see Merleau Ponty, 1968). The photograph is remarkable in its intersubjective and visual construction and in how it demonstrates how deaf children use signs to communicate and understand each other over large expanses. In doing so, the image collapses both spatial and emotional perception by representing the closeness and connection shared between the two friends.

The photographer/photographed relationship is dialectical and grounded in the reciprocity of vision, which in this case is mediated by an emotion of friendship shared by both parties. Despite the substantial physical distance between the two friends, that is, the photographer and their subject, the distance is transcended by using *both* hands to reciprocate

Figure 35.5 "Distant Hands," KwaVulindelebe, South Africa.

the "I love you" of the previous photograph. Holding both hands in an identical handshape intensifies the emotion insofar as it "doubles the sign" which not only doubles the emotional impact of the message but communicates across the intervening distance, recalling Merleau Ponty's (1968, p. 135) observations on the intertwining of proximity and distance that underpins vision:

> This distance is not the contrary of this proximity, it is deeply consonant with it, it is synonymous with it. It is that the thickness of flesh between the seer and the thing is constitutive for the thing of its visibility as for the seer of his corporeity; it is not an obstacle between them, it is their means of communication.

Whereas the counterpart image, "*My Friend*" emphasized the message and avoided distracting visual "noise" by strategically placing one hand behind the back, "*Distance Hands*" increases the message's "volume" by using both hands. By photographing hands and body within the milieu of their ordinary existence, they also take meaning from their surroundings, reinforcing how the expressive frame of the body is intertwined with vision, spatiality, and the emotional significance of place.

As part of the workshops on emotion and expression, "*Speed*" was taken in response to an exercise in which elementary school pupils reflected on their everyday life and identified what made them happy and what they valued. The idea was to visually represent what the experience of being deaf feels like, with a specific focus on the positive and joyful aspects of being deaf to offer a practical strategy and counterpoint to social perceptions and discourses that categorize deafness in terms of lack and impairment. "*Speed*" brings to life the physical, emotional, and joyful intensity of running. A blur of energy and motion, the placement of the runner and framing is playful and brilliant in that many photographs might place the

Figure 35.6 "Speed," KwaVulindelebe, South Africa.

runner on the left of the frame running into space. Here it as if the runner is about to burst through the frame itself and break the third wall through sheer *speed*.

Bodily and sensory perception are grounded in action and movement. Indeed, they are nothing but movement insofar as motor receptivity, intentionality and the nervous system irreducibly shapes the body from moment to moment through its actions in and engagement with the surrounding social and material environment. Likewise, social relations and personhood are also only made possible through bodily movement by positioning and establishing a person within the social order and relations of power, while simultaneously also offering a means for agency, autopoiesis and embodied existential continuity. The moving body, as the basis of perception and expression, continually creates new and different existential and emotional standpoints that themselves can be transformed through further movement and action (Irving, 2017). When understood as a mode of action and autopoiesis in the context of a specific form of life, movement, in this case *speed*, has the potential to displace normative forms of classification, generate changes in one's body, enhance health and offer a form of emotional well-being.

For many people, sport is important to community and cultural life. All too frequently deaf people remain marginalized from many mainstream sports and their surrounding communities and social activities. Employing the same exercise but with older children from M.C.K. School, Lenasia and Sizwile School, Soweto, "*Jump!*" captures in a single photograph the athleticism and joyful intensity of playing sport. Two volleyball players are challenging for the same ball on either side of the net. Their bodies are hanging high in the air as if escaping gravity itself. The photographer offers a new and interesting perspective on the world. They not only play with the technique of ensuring the sun is behind you when composing an image but use it to capture the energy and agility of the volleyball players by

Figure 35.7 "Jump!," Soweto, South Africa.

Figure 35.8 "*Frustration*," Durban, South Africa.

photographing their shadows: which are themselves full of life, emotion, and movement, as if the shadows are playing their very own game of volleyball.

Movement and action continually shape who you are in terms of identity, emotion, and expression. As such, embedded within everyday life—especially contexts where society is seen

Figure 35.9 "*Fear*," Durban, South Africa.

and experienced from the margins—is the capacity for smaller or larger scale movements in which a person can change their embodied sensory experience and understanding of themselves (Irving, 2017). This turns the question of *who am I?* from one of an externally ascribed social identity to one where movement and action can affect shifts in emotion, identity, and the senses, collectively and individually through running, dancing, jumping, and playing sport.

Human experience incorporates complex assemblages of perception, sensation, and emotion—alongside non-linguistic and image-based modes of thinking—to create our embodied being from moment to moment. What is experienced simultaneously within the body across different cognitive, sensory, and emotional domains may be difficult to separate out, identify, or articulate in language, reinforcing how lived experience often exceeds what can be expressed, including by the person themselves. While some realms of experience or emotion remain incipient or unarticulated, others coalesce into stable symbolic and communicable forms for expression to oneself and others.

The two stills above derive from films that were made by secondary school pupils at Fulton and V.N. Naik schools for deaf children in Durban. The films are experimental and investigational in character and emerged from a spontaneous workshop experiment, rather than one that was planned. *Stage One* involved the different groups trying to identify the embodied content and character of an emotional experience without sharing with the other groups. *Stage Two* required filming the emotion *without* being able to film any part of a person's face or body: instead, the group had to find and then film the emotion in their nearby surroundings within 100 meters from the workshop. This is a difficult task that even experienced film makers might find challenging. *Stage Three* comprised of showing the resulting film sequence to the other groups to discuss and identify the emotion being represented.

One group I worked with described the complex, undulating and churning assembly of emotions that are experienced when waiting for an important piece of news, for example, when waiting for an exam result. In such contexts, multiple emotions are experienced simultaneously at the level of the body—including those that might be separated and differentiated in language—combining a mixture of hope, uncertainty, anxiety, optimism, fear, and more. The group discussed the possibilities of how to condense this range of emotions into a single word that would best describe the embodied experience, eventually alighting on *frustration*, then translating this and its embodied properties into an image.

Tasked with filming and representing the emotion without recourse to filming face or body, the group collected two large piles of fallen leaves. The camera was set up so the leaves were out of shot, then through a coordinated action the leaves were then repeatedly thrown into the air into the camera's view, swirling and spinning in the air, to create a dynamic visual metaphor to convey the churning embodied experience of frustration as felt and sensed in the stomach, chest, and body. Words do not exist in stasis but come alive and are experienced through the body, right down to the movement of proteins, chemicals, and electrical impulses in the brain and nervous system. This reinforces how words and categories are grounded in a particular relation to Being and are not solely tools for communication: instead we also inhabit and dwell in language (Heidegger, 2000). Words continually resonate between people and connect emotional and bodily experiences, in terms of people's ongoing social and intersubjective interactions but also mirroring at the level of neural activity (Rizzolatti, 2008). By representing the embodied experience and emotional assemblage of frustration through the churning movement of leaves, the pupils arrived at a way of communicating a concept and sharing experience at a visual level that was then subject to reflective discussion when the clip was shown to their peers.

Extending the way perception and sensation are emergent within the ongoing interaction between body and world, *Fear* was made by a second workshop group. The film-still is from a sequence where the camera, held in a crouching position, inches its way down a narrow space. The act of looking continually establishes people's sense of the world. Here the filming is self-consciously hesitant and nervy in its interactions with the surrounding surfaces in order to visually convey uncertainty and communicate the sensation of fear. Camera movement necessarily incorporates the physical body of the filmmaker and here the camera moves with trepidation, taking the viewer slowly through the narrow space to create emotion and register on the viewer's nervous system by a process of what Theodor Lipps (1851–1914) called "inner-mimesis," or *nachahmung*, whereby we feel as though we are acting in or through another person's body (Reynolds, 2012).

Conclusion: returning to the senses

The term "sensory ethnography" encompasses a broad spectrum of research, methods, and practices (Howes, 2018). Coming from *sentire* to "perceive, feel, know" and *ethnos* meaning "people, race, culture, nation, class, caste; a number of people accustomed to living together," sensory ethnography encompasses the idea of a people who sense, experience, and understand the world in a similar way through their co-dwelling within a shared social and cultural environment, and whose constitution is typically based on the sensory capacity for hearing and hearing-based forms of life and learning. This is grounded in two epistemological approaches for understanding the differently lived qualities of sensory perception and experience, namely, the existence of species-wide phylogenetic capacities and human biology,

and the demarcation of social and cultural contexts through which shared ways of perceiving, sensing, and interpreting the world emerge. These approaches are not incommensurable and are often combined to explain how diverse cultural forms and practices can emerge from universal, phylogenetic capacities—for example, when radically different forms of being and expression are seen as deriving from the same basic needs or desires.

However, even in combination, our disciplinary and epistemological foundations are continually challenged by people's varied bodily and sensory experiences of the world. If we are to understand the commonalities and diversities of sensory experience, it is less a case of asserting biology over social and cultural context—or vice versa—than of opening a space to align with the specificity and variation of people's embodied qualities of perception in action insofar as "If we take the problem of individuality—or variation—instead as a starting point for the mutual inflection of biological and social norms, 'context' begins to appear in a different light" (Das & Han, 2016, p. 16). This establishes alternative epistemological and anthropological possibilities by foregrounding the particularities and contingencies of the perceiving body and its relationship to the surrounding world. A sensory ethnography of specific bodies in movement and action—rather than presupposing shared social and cultural experience—emphasizes variation and draws attention to how diverse bodily potentials are differently constituted.

Being and having any kind of body is to be positioned between abstract normative models of sensory perception and one's own embodied experience of the world. People do not sense or experience the world through identical bodies—especially given our bodies change from day to day and over time—but through bodies that encompass many different modes of seeing, sensing, and understanding. Indeed, a standard body does not exist in any tangible, empirical sense but is an abstraction produced by statistics, averaging out differences and dividing bodies into classifications of normal and pathological (Canguilhem, 2008) wherein the hearing body offers a normative index against which other bodies conform, differ, or fall short of.

It is a process whereby deaf bodies are marked and categorized by a perceived lack of sensory capacity in ways that undermine the recognition of personhood, facility, and aptitude. This reinforces how the human body can be understood as a performative medium of interaction through which a person engages with society and comes to understand themselves as a particular kind of social and moral being, within wider networks of social, political, and economic power (Irving, 2017). For deaf persons, this frequently means one's embodied modes of thinking and being, including one's basic communicative needs and everyday practices of visual communication, sociality, and expression, are often not accommodated, highlighting how the formation of categories of bodily and linguistic difference are ones in which exclusionary practices and inequalities become sedimented and normalized (Gilman, 1985).

The social lives and experiences of deaf children not only loom large in shaping the sensory and linguistic futures that are available to deaf people (Friedner & Kusters, 2020) but to return to Geertz's opening quote, imagining the different kinds of life a deaf person might end up living. Often, although not entirely accurately, described as a "people of the eye," using photographic and filmmaking practices actively recognizes and engages with the specific capacities of many deaf people's visual orientation to the world to offer a creative, collaborative, and life-enhancing means to explore key questions concerning personhood, emotion, language, and identity. By responding to the deaf young people's embodied visual and practical understanding of the world, the photographs in this chapter are not simply a mode of documentation and representation but a means of enabling deaf children to understand and

position themselves within society, within culture and the *form of life* of which they are part of but in large parts encounter from a marginal and excluded perspective. Working with vision, offers a deaf inclusive means not just for the acquisition of knowledge but also for the understanding, interrogation, and expression of experience that does not start from models of impairment—or the translation and adaptation of existing hearing-based pedagogies—but from deaf young people's sensorial lifeworlds and visual ways of being. On the one hand, this requires negotiating the ongoing forms of social and linguistic exclusion, and lack of formal and informal learning opportunities that results many deaf young people finding the spoken and written word substantial barriers to social life, relations, and communication. On the other hand, it highlights how the spoken and textual imperative found in anthropological research can be productively recast to allow for new, non-linguistic fieldwork methods and inclusive approaches to ethnography (Cox et al., 2016).

The photographs and films in this chapter did not emerge *ex nihilo* but through a partially guided and partially improvised encounter between the young people's existing visual orientation, the camera, and the world. As such, and per Jean Rouch's extensive use of spontaneity and rencontre in his ethnographic film practice, the focus was less on visual technique but developing a process of making that aligns with deaf young people's embodied ways of being and visual knowledge, reinforcing the idea that "most new discoveries are suddenly seen things that were always there" (Langer, 1979, p. 8). By visualizing and making observable the realms of thought, emotion, memory, and imaginative possibility that are inherent within deaf young people's embodied and sensory lifeworlds, visual methods not only have the capacity to better understand young people's moral perspectives on the social world and their future but also facilitate the development of new modes of perception, understanding, and expression to creatively represent their experience of being a body in the world.

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36

REPRESENTING SENSORY CULTURE, ENACTING COMMUNITY

"The Full English"

Alex Rhys-Taylor

This chapter turns an ethnographic attention to the complex relationship between taste, culture, and identity articulated through a community arts project. It contrasts these with the broad narratives about food and nationhood presented through the cultural industries. Drawing on the work of a community arts initiative in East London, the chapter argues that community art and development work can find significant value in "thinking with the senses," identifying themes and materials around which both the activities of art and community building might coalesce. At the same time, such work can also address certain deficits in both researching and understanding the relationship between sensory experiences and contemporary forms of community and identity. Community arts initiatives often require sustained and embedded relationships with communities. As the chapter will illustrate, this means that skillful community arts practitioners can access, and represent, elements of life, experience, culture, and sociality that other types of ostensible "participation" cannot. In engaging with the minutiae of everyday life, such activities can provide useful resources for sensory scholarship, revealing the rhythms and textures, fears, and sources of joy, of what are often misrepresented areas of life. Community arts are not only well positioned to generate ethnographically rich representations of urban sociality. Rather, they can also often go beyond simple representation, to actually *enacting* forms of sociality and community that they present.

Spice, migration, and gastronationalism

One of the most recurrent tropes in discourses about "national identity" and "belonging" in postcolonial Great Britain is the transformation of "British" food culture by way of contact between the center and peripheries of an erstwhile Empire (Panayi, 2008). Among the most iconic objects within these narratives are the spices and cooking styles associated with countries now known as India, Pakistan, and Bangladesh, reductively referred to as "curry." Over the last three centuries, many of the tastes and texture of this region have become integrated into the normative "sensory order" of mainland British culture. Exemplified by a British politician in the 1990s proclaiming Chicken Tikka Masala as national dish, what Panikos

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Panayi (2008) refers to as the "spicing up" of British "taste" has become an important part of British "gastromythology" (Chatterjee, 2021, 2022).

There is nothing new about these narratives. Through the 1800s, at the same time that bloody massacres and mutinies unfolded across India, an anglicized curry powder was becoming a regular feature in domestic British cookery books (Collingham, 2007; Narayan, 1995). Therein the spices associated with curries—akin to tropical pot plants and chintz wall paper (Johnson-Schlee, 2022)—became a domesticated form of exotica. The domestication of these sensations was far from an incidental aspect of colonial conquest. Moreover, the *integration* of new flavors "from the colonies" into Britons' lives came with the *imposition* of sensations, culture, rhythms, and language to "the colonies" as subjects were assimilated into Empire (Belmessous, 2013, pp. 85–92).

With the demise of Empire, the flavors, colors, and smells of former colonies have remained a staple of British cookery books and culinary discourse. However, rather than being emblems of the expanse of empire, they have been resignified as celebratory markers of a hospitable, liberal, multicultural Britain. Therein talk of the sensory and cultural assimilation of former colonial subjects is taboo. Rather, and especially throughout the late 1990s and early 2000s, the *integration* of culture from former colonies was celebrated through political speeches (see Cook, 2001), newspaper articles, books, and crucially, the era-defining cookery shows. Even the official song of the national football team in this period had as its name and repetitious choral refrain taken from the Goan dish, "vindaloo" (Fat Les, 1998). As Buettner notes, even in the wake of 9/11 and the 7/7 bombings in London, while "much else that was culturally associated with Britain's South Asian community attracted increased suspicion," curry only increased its presence as signifier of successful multicultural Britain (Buettner, 2008).

Alongside the greater diversity of flavors presented by celebrity chefs, recent years have seen "reality" TV cookery shows such as Come Dine with Me, Ready, Steady Cook, or the Great British Bake-Off seeking to represent a greater polyphony of "food voices" in Britain. In showcasing home-cooks and everyday practices, these latter media have occasionally reflected more of the complexities of race, class, and gender otherwise obscured by the broad-brush-stroke gastro-nationalist stories. They have certainly offered a better vision of the complexities hidden behind the monikers such as "Briton" or "British Asian" (Brah, 1996). There is much to be commended about these efforts. However, it is also the case that these popular representational forms still tend to draw on an "saris and steel drums" integrationist model of multiculture wherein obviously non-white contestants are subjected to explicit expectations vis-à-vis their parents or grandparents' migratory status. When they are visited as part of the round-robin of dinner parties in Come Dine with Me, hosts are often expected, by other participants, to serve food from their "heritage culture," despite often losing marks for it. In the great British Bake Off, contestants from non-white backgrounds are often awarded a sort of "contingent insider" status (Back, 1996, pp. 66–73) for the unique flavors that they bring to the aristocratic environs of the Great British tent. But they are also always on the cusp of being kicked out for either not utilizing their heritage enough, or, paradoxically, for their over-reliance on spice. As complex as the symbolic economy at work within these culinary performances of identity are, they can also leave a Eurocentric sense of "us" and "them" intact. *Them*: migrant "communities" with loud "food voices" (Long, 2004) and durable attachments the authentic essences of "home." *Us*: the cosmopolitan natives with muted but eclectic tastes.

These are important representations because they seek to promulgate discourses that modulate the meaning of everyday sensoria that their lives, shaping senses of identity and

understandings of community. As Camile Bégin discusses in her history of state-funded food writing in New Deal America, food media can play an active part in shaping an explicitly national "sensory economy" (Begin, 2016, pp. 157–160). Whether by text, photography, or other media, twentieth-century culinary–cultural intermediaries have often worked to arrange specific flavors and food related sensations in a hierarchy of value for their audiences. These narratives also sanction specific myths and origin stories, curating a collection of dishes, sensations, and ingredients as "national dishes." In Begin's case, the narratives quite deliberately sought to "enact" a form of nationhood and instill a "sensed community" (Howes & Classen, 2013, p. 84) among their audiences. Deliberately or not, popular representations of a "nation's" food cultures can both accidentally and often willfully, obfuscate the complexity of the relationship between taste, identity and "the nation." That is to say, the arrival of Chicken Tikka Masala as the national dish of Britain (Cook, 2001), as was widely claimed in the early years of the new millennium, was hardly the result of a simple process. Aside from the sweeping centuries of colonial violence and extraction under the carpet, the elevation of the Anglo-Indian confection to a national dish said nothing of the ongoing racism experienced by those whose recipes had been expropriated. Nor did it say anything of the ongoing reluctance among many to recognize the migratory "routes" underpinning of British culture and history up to that point. And lastly, crucially, the story about liberal, hospitable, multicultural Britain getting "spiced up" contained no sense of the culinary revolutions that were taking place on domestic dining tables as newly arrived sojourners and their children playfully, and voluntarily, experimented with the ingredients and flavors that had already accreted in the calcified heart of Empire.

The full English

At root of many of the problems emanating from stories about the British Isles getting spiced up is their jingoistic solipsism, an artifact of ethnocentric research and representational practices. These are stories told from the majoritarian center of a society; sanctioned by its great institutions, signed off by chief speech writers and commissioned by influential editors. And, as such, these stories are constrained in terms of who can write them, and where they can tell them. All of these mean that they are subjects of the historic structural racism of academia, cultural industries, and the arts (Saha, 2021). They see what they want to see and tell what they want to tell. And, in doing so, they strive to enact specific versions of community and identity. Crucially, the liberal gastro-nationalist stories told from the center cannot help but have little to say about the complexity of life in what it sees to be its peripheries. As much as the transformation of sensory culture is a recurrent theme in celebratory discourses about national "belonging" in multicultural Britain, the focus on changes in the majoritarian culture leaves significant lacunae.

One of the most obvious shortcomings of ostensibly "cosmopolitan" national gastro-mythologies is that, in their rightful weariness of assimilationist rhetoric, and their labored enactments of liberal multiculture, the stories that they tell tend to focus on the movement of taste and ingredients in *one direction*. The oft-told story of "spicing up" Britain is a story about the movement of sensoria and their purveyors, from "guests" at the margins of society, into the welcoming arms of an ostensibly "hospitable" host culture. Aside from glossing over the violence that this process entails, the narratives are also lacking in representations of *multidirectional* movement of flavors, tastes, textures, and food practices. They are devoid of representations that, for instance, capture processes of *transculturation* (Berg, 2019; Ortiz,

1995) as ingredients, flavors, and cooking practices move between the different communities living in the cramped confines of the city's edges (Rhys-Taylor, 2013). Consider, for instance, London's Jerk Chicken Bagel, cooked up between the sensory lifeworlds of migrants from Eastern Europe and the Caribbean. Perhaps even more importantly, these representations and stories fail to adequately capture the movement from the majoritarian canteens and corner shops, into the communities at a society's spatial and cultural margins. They say nothing of the transformation of erstwhile migrant communities' tastes as they become established communities in a new home. A full accounting of the multiple directions in which flavors and cooking practices osmose, is crucial in telling stories about Britain and Britons that are congruent with its lived multicultural reality.

Among the notable of story tellers proffering hitherto untold narratives about these types of socio-sensory change, is East London-based artist and community organizer, Nurull Islam. Utilizing the radical accessibility of video, photography, and sound recording, as well as extensive community networks, Islam has been involved in the production of a series of films and projects within inner-East London over the last decade. Through these community-led films, which are generally shared on-line and through public screenings, otherwise under-represented voices have found a space to tell *their* stories. Notable among these projects is a film Islam made with a community youth group about the social life, and cultural significance, of East London's fried chicken shops (Islam, 2015).

Featuring a mix of East Londoners from various backgrounds, shot, and edited with the same young people, the film shows the subtle variegation, sociality, and meaning hidden beneath the plastic signage of London's much-maligned fast-food institutions. Starting as a local community project, the film bypassed the usual cultural intermediaries and achieved a degree of online virality before eventually reaching national news outlets, newspapers, and broadcast media. If nothing else, the success of the short film suggested that there is significant interest in representations of urban food cultures that, to one degree or another, offered a contrast to the tired myths and connotations hitherto ascribed to the sights, smells, and sounds of Britain's multicultural cities (Rhys-Taylor, 2020, pp. 75–99).

In a more recent foray into the culinary and cultural life of East London, Islam paired with local photographer, Rehan Jamil in a project called *The Ful English*. Together, the project leaders utilized sustained community engagement alongside ethnographic methods such as interviews and documentary photography to develop a series of portraits, sound recordings and discussions, about food, migration, and identity. Developed with the politics of representation at its heart, the project sits within a strong tradition of work that draws from critical ethnography as much as it does to and from art (Foster, 1995). More than that, the project also builds on those methods to illustrate the potential for ethnographers to engage in meaningful enactments of community and identity through research.

The title of the project, *The Full English*, refers to the purported national breakfast of England: a hearty, and heart-health imperiling, combination of fried egg, bacon, and toast (with possible additions of mushrooms, sausage, tomato, black pudding, and baked beans). A staple of cafés throughout twenty-first-century British cities, the original breakfast was neither proletarian nor urban. Nor even breakfast. Rather, it was a late-morning showcase of everything that a wealthy country farmhouse could muster. It is only over the last century that the meal moved to earlier in the day and became a well-established icon of working class English (if not British) cuisine; "one of the great institutions of England" (Countess Morphy, 1936, cited in O'Connor, 2013, p. 10). Its association with Englishness, in the first instance, came from its ingredients' ability to quietly index the "green and pleasant land" of

their origins. But there are other factors at work here too. Breakfast, it should be noted, has historically been more closely associated with a normative masculinity (O'Connor, 2009, pp. 159–160). As a barely mediated set meaty ingredients, the full English is also more readily associated with masculinity and raw strength (Lévi-Strauss et al., 1992). Masculine and working class, there are also other ways in which the breakfast has also functioned as something of a gatekeeper to a normative "English" ethnicity, notably the presence of bacon, sausage, and pig blood sausage as central features. These ingredients have gone a long way to excluding Muslim and Jewish Britons, along with Rastafarians and others, from sensuous enactments of a national community over breakfast.[1]

These connotations are why the title of Nurull Islam and Rehan Jamil's photography and interview project is so potent. From the outset, *The Full English* begged the question: what, if not the normative archetype, constitutes the fullness of identity in twenty-first-century urban Britain? If assimilation is a relic of darker age of colonial oppression, and if integrationist discourse is essentializing and reductive, how do we make sense of identity and community in the post-colonial city? The title is also a central motif in one of the most striking photographic portraits in their project, a picture of East Londoner, Mohammed Saleh Ahmed. In the image Mohammed, dressed in a keffiyeh headdress and radiant white thobe, is sat against the wood paneling typical of mid-century British "caffs," smiling hungrily over a plate brimming with the "full English:" two fried eggs, sausages, strips of "halal bacon," pieces of toast, and a pile of baked beans. As part of the community art project, this image was featured as part of public exhibitions, on the walls of local restaurants, galleries, as well as being posted on a 10 ft high billboard above a major road intersection in East London for several weeks over Christmas 2021. The image carefully frames a conspicuous juxtaposition, taking stark stereotypical signifiers of cultural identity, and pairing them together.

Crucially, as much as the image (and others in the series) is framed and composed, it is not exactly a staged photo. Every participant in the Full English is sharing something of their own culinary and cultural lives. The perspicuous contrast in both images foregrounds cultural differences that endure within London's "integrative" multiculture, but it does so to highlight affinities with wider "Englishness." In this latter respect, the portraits in the Full English offer a powerful illustration of the extent to which identity formation in British cities far exceeds the explanatory power of integrationist or assimilationist models of multiculture.

Perhaps the most potent aspect of Islam's project, however, lies in the interviews he collected from participants. Marked by the comfort with which participants share their stories, and the interviewer's awareness of the "right questions to ask," these interviews are rich in detail, emotional resonance, and context. They are the helpful examples of the extent to which arts and community practitioners can draw on sensorially attuned modes of attention. But, perhaps more significantly, they are also illustrations of ethically engaged and socially valuable interventions; something that sensory scholars could do well to learn from. Consider, for instance, the following interview conducted by Nurull, with a 40-something year-old participant, Fath.

> First time I had a full English breakfast was in 1993. I think I was about 17. Back in the dinosaur times. You know, the full English breakfast is not something we ever had . . . The closest we've got to that was we used to have was we used to have eggy bread. We used to have beans. We used to have pineapple slices. Or my mum on a Sunday, she used to make bowls of chips, and we used to sit there, watching the Smurfs, with a fried egg on top, dipping it in with our ketchup and the egg yolk.

> We didn't have English food at home much then, but we used to have it for school dinners, and we used to enjoy that. . . . My little brother, once injured his leg or something, and he got excited because he thought he's gonna go into hospital and he's gonna be admitted and he's going to sit there and eat English food. It was something that we always look forward to. I remember my neighbour, when she used . . . when they used to fry, I used to wonder what the smell was. I discovered it was bacon and, you know, I couldn't eat that because it was haram, and I wasn't allowed to east that kind of stuff. I remember when I was a little bit older, I bought myself a packet of Frazzles. Frazzles is like these bacon flavoured crisps that look like bacon as well. . . . I hid and ate them because I knew my parents would be angry that they were bacon flavour. I didn't know at that point that you can look at the back of the pack to discover that they were vegetarian. All I knew was I wanted to eat bacon flavour crisps. So, I ate it. Yeah, so, they were the good old days. My kids take the mick out of me when they hear we didn't eat the full English breakfast and think I was born in the dinosaur times.
>
> *(Interview of Fath by Nurull Islam for the Full English project, 2020)*

Rich in sensory, cultural, and emotional details, this ethnographic portrait of everyday life contains several snap shots that lend a lot to understanding the formation of identity, and social life, in urban Britain—and beyond—over the last 40 years. For instance, within the vignette are details that resonate with swathes of people from Fath's generation, irrespective of cultural background, or specific global locality. Thanks to the advances of globalized television media, over the 1980s and the 1990s, the technicolor adventures such as those of the Smurfs were broadcast to hundreds of millions of young people over breakfast, lunch, and dinner, whether in the United States, Europe, or beyond. There is a large, transnational community, for whom the Smurfs, and a whole village of other globalized cartoon brands, for whom TV and fast food, mean *something*. And there is an extent to which these generations' identification with global consumer brands, the vernacular that they share, shapes identities beyond the historical contingencies of the nation state. That, at least, was the intention of the global brands as the millennium drew to a close (Cova et al., 2007; Holt et al., 2004). The presentation of this moment as part of the art project also conjures a sense of that generation who grew up with a global purview.

The addition of a chip (i.e., French fry) dipping into the yoke of an egg while watching the Smurfs, however, localizes the resonance of the Fath's story. Chips with steak, ham, or eggs become particularly popular across northwest Europe throughout the turn of the nineteenth century. The frittering of potato batons appeared in the 1790s Paris at roughly the same time as it started its journey to the heart of Belgitude ("La Frite Est-Elle Belge Ou Française ?," 2013). It was also on the continent that British soldiers with the fortune to survive bouts in the trenches would supplement their rations with food of local cafés. Those cafés' menus would routinely feature fried egg and chips (Fussell, 2013, p. 342; MacArthur, 1919, p. 22). The versatile dinner/lunch/breakfast would subsequently find its home in amidst rations and lean budgets that delimited many British household diets over the twentieth century.[2] As Fussell notes, many of the material vestiges of the last century's wars have faded as fast as living memory of them has (Fussell, 2013; see also Brearton, 2014). The culinary echo of yolk-covered chips, however, has oozed through the subsequent generations of working-class Britons. Somewhere between the affinity with the transnational brands of globalized culture on the one hand, and hyper-local "neighbourhood

nationalism" (Back, 1993), on the other hand, there remains are hints of a sort of loose, *national*, community imagined, or rather, sensed, through these sensations.

Other moments in the account speak to the unique histories of settlement in East London, particularly to the experience of second-generation Londoners, whose parents may have arrived from elsewhere. This is especially so where the monologue goes beyond the materiality of food, and touches on the *meaning* and emotional valance of the sensations it foregrounds. As in most erstwhile maritime metropoles, there have long been differences between neighbors unfolding in the city's east. The city's migratory histories have long had communities with different values, mores and manners living shoulder to shoulder with one another. Consequently, a sacred morning ritual for one can be an ostensible abomination for the neighbor on the other side of poorly constructed partition wall. How each urbanite responds to sensations associated with cultural practices of others, how neighbors make practical sense of the osmosis of aromas and noise between one another's private spheres, is part of what defines urban multiculture's relative success. But that success is by no means guaranteed. Sensory encounters with "otherness" in cities can go any number of different directions. One of those ways is famously foregrounded by bell hooks in her famous essay "Eating the Other" (hooks, 1992). As the curry shops of East London's Banglatown's testify, the ostensibly novel "exotic" sensory experiences associated with ethnic difference are enduringly commodified, even at the same time as they are supposedly integrated into the "hosts'" national cuisine. As Manalansans account of Chinese migrants in New York illustrates well (Manalansan, 2006), being sensed as different to a majoritarian norm, can also be perilous to migrants whose labor is necessary to the functioning of the city.

This twin pincer of exoticization and the danger and violence it entails, is one of the things that is missing from the overall narrative about Britons getting "spiced up." Another absence is the fact that curiosity about sensory novelty works in multiple directions, and can also have far less spectacular, although equally remarkable consequences. Consider, for instance, the fetishization of beige British hospital food by Fath's brother; a real life version of the parodic inverted exoticization featured in the comedy sketch "Going for an English" (Bhaskar et al., 1998). Or consider the central moment in Fath's food story, the purchase of a bag of Frazzles. Although the smell of bacon was initially a curiosity, Fath explains that as she learned about the meaning of this smell from her parents, who defined this smell as something entirely unholy.

Enacting community: art and sensory research

It has long been a contention of sensory scholarship, that human life is richer than the prebaked narratives that we use to understand and describe ourselves. In practice, the lives that people live are more nuanced even than the parts that we want them to play and their affinities more expansive than the "communities" and cram them into. This is especially important to bear in mind when reflecting on the relationship between food, identity, and community. It is also the contention of sensory scholars that if we *listen*, both metaphorically and literally, to the sensoria that fill people's lives, and how they make sense of them, we might achieve a far better understanding of who and where "we" are today (Back, 2007). In this respect, community arts practice stands to offer a lot. Sustained and engaged community arts practice provides a means by which to engage communities, over the long term, in telling their own stories, in representing their own lives. The digitization of media especially has revolutionized the potential for individuals to represent their own lives and show the working of the

social worlds they are part of. And talented practitioners within community arts can actualize those possibilities.

Crucially, however, this type of art does a lot more than mere representation. As contemporary sociologists know too well, the methods and representational practices that we use, and the knowledge that we produce, are also tangled up in the enactment of the communities that we work with (Law, 2009, p. 239). Sometimes a researcher uses a category that participants come to adopt (Giddens, 1986, p. 374). Sometimes the presence of a researcher transforms social relations in ways that their absence would not. Sometimes a measurement of something creates a problem or a debate that would not have hitherto existed. Historically these enactments have been accidental and if ever noticed, seen as markers of a failure, and swept under the carpet. Increasingly, however, these interventions are deliberate. That is, research is designed with an acknowledgment of the inevitability of social researchers; impact on their subjects of research and vice versa. It is an acknowledgment that is made with a view to steering the ethics and impact of that research (Douglas & Carless, 2013; Haseman, 2006; Schoonenboom, 2019).

Impacting on the communities that practitioners are working with is also very familiar within community arts practice. In fact, community art's raison d'etre has always been the performativity of the concepts it deploys; with "success" measured by the extent to which a project enacts, as opposed to represents, "community" (Grodach, 2010; Lowe, 2000). As such, practitioners such as Nurull Islam's have emerged to take on labor that in previous decades might have been allocated to community development worker; bringing people together, intensify the loose connections that exist in a neighborhood, and to creating new ones. The Full English has certainly done that. Through a series of events in community centers, restaurants, local businesses, and universities, through having its portraits plastered above the key interchanges of London's A-Roads, through a planned "pot-luck" cooking event, the project literally, physically, brings people together. Cooking, and the subject of food and taste have proved to be a fruitful subject for this type of community building activity. But more than simply bringing people together in a room, projects like the Full English offer a sense of "being together" as part of a "sensed community" (Howes & Classen, 2013, p. 84). Through sharing stories about food, both participants and the project's audience recognize affinities to varying degrees and scales, with one another. And in teasing out each participant's idiosyncratic sensory biographies, the project also helps to understand differences. This project, which listened to, and tasted, the minutia of participants' lives, provided a language, a set of images, and sensory experiences through which both participants and their audience can narrate their own lives, as well as their relationship to one another.

In this respect, *The Full English* offers a crucial counterpart to majoritarian representations of food and culture in twenty-first-century Britain. Of course, the story about Britons getting spiced up is an important story to tell, if it is told with a full attention to the historical injustice it entailed, and with a view to all the complexities hidden behind the monikers "Briton" and "British Asian" (Brah, 1996). But this story told from the majoritarian center of a society is far from the full picture of socio-sensory processes in twenty-first-century Britain. An attention to the sensory lifeworlds of people, especially those living in diversely populated cities, reveals many more of the underacknowledged facts of their experiences. More than that, such projects promulgate the skills, stories, and related sensoria, that help to enact and fortify communities in those cities against processes and events that might otherwise erode them.

Digest

Across art, and bestselling recipe books and national broadcast media, taste has long been used as a device for telling a relatively limited range of stories about where, and what, national culture is. Indeed, some of these representations deliberately work to enact a broad imagined community. Or, more recently, these representations have given succor to a vision of pluralized nation made out of a mosaic of disparate communities. Taste is a particularly powerful sensory modality for these purposes. But it is also useful to challenging the idea of community and identity evoked by these representations. The power of the sense of taste to speak to the *actual* histories and culture that live through the body is precisely the reason that Nurull Islam chose to focus on the flavor-scape of East London for a project that is ultimately about changes to forms of identity and community. In this respect, the multisensory modes of attention honed through sensory scholarship might have something to offer the practices of community arts. But it is also clear that in the collection of data, representation of participants and dissemination of "findings," community arts initiatives have a considerable amount to offer sensory scholarship: For instance, *The Full English* does not need to drown the complexities that its portraits and interviews capture in a soup of text. The materials of the art project consistently exceed the explanatory power of the written word.

Moreover, and crucially, the work provides images and stories that have served as a point of connection between the biographical experiences of its audiences. Or rather the project revealed "communities" of affinity that, while they might have been loosely "imagined" in the abstract, were never rarely ever made tangible or "sensed." In sharing the work at events and venues throughout East London, in bringing people together, in delineating sensory affinities, the work serves not only to give a sense of multi-scalar communities to which various experiences and rituals matter. It enacts the complex web of associations it also illustrates. Foregrounding the background of daily life serves to conjure "sensed communities" that are both more localized, and more expansive, than any shorthand understanding of the national, "imagined community" can offer. Artist, community development worker, or scholar, we would do well to ask more questions of our breakfasts. We would do even better if we did so, while asking questions of one another.

Notes

1 The same, by the way, is arguably the case for many of Europe's invented national cuisines. See the historic mobilization of pork consumption against Spain's Jewish and Muslim communities in Ingram (2009).
2 That includes this author's own childhood diet, wherein chips (from the chippy) and egg (cooked upon returning home) were an occasional evening treat when things were tight.

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37
SENSORY VERITÉ

The intersection of sensory ethnography, sensory biophilia, and cinéma vérité

Kathy Kasic

This chapter presents an introduction to an ethnographic film style I call sensory vérité: a comprehensive sensory exploration concerned with how we interact with each other and our environment in a sensorial–cognitive approach. As the title of this chapter suggests, sensory vérité represents the filmic intersectionality of sensory ethnography, sensory biophilia, and cinéma vérité, each of which I describe later. Sensory ethnography and sensory biophilia comprise sensory filmmaking in the absence of major linguistics, while cinéma vérité incorporates substantial linguistic elements. Furthermore, sensory vérité films acknowledge the interconnectedness of ecosystems with our societies and use an informal, interactive voice and sensory aesthetic.

This chapter not only describes sensory vérité's lineage as a theoretical position grounded in science, it also samples sensory vérité films and how they are made. Finally—and running parallel to the core aspects of my being a film professor, an active filmmaker/practitioner, a biologist, and simply a sensing person like any other—I address the calibration of the mind behind the lens in terms of the wide cognitive focal length of sensory vérité.

Sensory ethnography

Sensory ethnography is related to observational filmmaking wherein the films present sensory experiences reflecting the actual experiences (MacDonald, 2013, n.p.), specifically of human beings. Sensory ethnography viscerally connects to another person's experience, allowing the spectator to resonate with them through haptic visuality. Initially conceived of by the Sensory Ethnography Lab (SEL) at Harvard University, video-based sensory ethnography is the pursuit of capturing the aesthetics of cultural existence, largely independent of language and linguistics. As film theorist Catherine Russell writes, "against the desire for transparency that is supposedly at work in dominant modes of ethnographic film practice, the work of the SEL is designed to produce something more experiential, embodied, and aesthetic" (2015, p. 27).

Sensory ethnographic films are concerned less with the question of the objectivity in film production, but instead with the idea of immersion in a space with people. The focus on place immerses the viewer within a single location and ethnographic group: for

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example, a fishing boat and its fishermen in Lucien Castaing-Taylor and Véréna Paravel's film, *Leviathan* (2012)*;* ranchland and its ranchers in *Sweetgrass* (2009) by Lucien Castaing-Taylor and Ilisa Barbash; or the Songhua River and its fishermen in Sniadecki's film *Songhua* (2008). In the observational tradition of documentary film, SEL filmmakers typically handhold the camera, giving the feeling of being connected to their subjects and within their world. However, they diverge from traditional observation through the focus on sensory aesthetics. As film theorist Catherine Russell writes, "against the desire for transparency that is supposedly at work in dominant modes of ethnographic film practice, the work of the SEL is designed to produce something more experiential, embodied, and aesthetic" (2015, p. 27). Lucien Castaing-Taylor and Ilisa Barbash's early work of *Sweetgrass* (2009), following Montana ranchers in the sweeping landscapes of the mountain foothills, is distinctly different in style and content from later work *The Fabric of the Human Body* diving contextually into a French hospital and corporeally into the human body itself (Paravel & Castaing-Taylor, 2022). This latter work is the ultimate attempt to be within the body, as if one cannot be sensory enough without physically being inside it. The sensory immersion takes us deep in the human body. Certainly, this film relies more on visual poetry and observational dialogue than *Sweetgrass*, and is evidence for a continual transformation of their film style.

The SEL website definition states:

> [H]arnessing perspectives drawn from the arts, the social and natural sciences, and the humanities, SEL encourages attention to the many dimensions of the world, both animate and inanimate, that may only with difficulty, if it all, be rendered with words.

If there exists a principle in ethnographic filmmaking of developing an understanding of culture, then films using the word "ethnographic" ought to incorporate contextual and conceptual devices to create a more complete description of their subjects. Without a mediation between extremes of intuition and concept, between sensory experience and cognition, cinema devolves into simplistic polar ideologies, resulting in an "empty conceptualism on the one hand, or a blind empiricism and a sort of cinematic nominalism on the other" (Pavsek, 2015, p. 5).

Films in the purist SEL tradition tend to eliminate the majority of comprehensible dialogue, relying on the viewer to interpret imagery and behavior, without much additional context as to the motivations and cultural practices. Russell describes the imagery and sound of *Leviathan* as textual devices, and states "that viewers will inevitably 'read' these textual elements in terms familiar to them, seeking significance in lieu of explanation or information regarding the film's content" (Russell, 2015, p. 32). Perhaps we should heed Pavsek's warning about what the implications are of allowing viewers to make assumptions about the people they are watching, when those individuals have no voice and no control over how they will be depicted conceptually. It leaves us with a thin, blind portrayal of the characters, which is potentially a reckless approach when working in ethnographic film (Pavsek, 2015).

The exclusion of language, while at times deeply poetic and emotionally moving, may be a problematic approach for self-described ethnographic films attempting to bridge cultures (Kasic, 2020; Pavsek, 2015), and is not a comprehensive sensory exploration of human existence. Furthermore, the nomenclature of "ethnographic" is inherently exclusive to human cultures, which is speciesism. While the sensory ethnographic film may explore the

"aesthetics and ontology of the natural and unnatural world" (Castaing-Taylor, 2023, para. 1), it necessarily must do so from the point of view of prioritizing the human culture, starting with its very name.

Sensory biophilia

Sensory biophilia is an eco-cinematic approach decentralizing humans and focusing instead on a sensory depiction of an ecosystem (Kasic, 2014). It values the ecosystem as a major character in a film and is based in part on the theories of biophilia from biologist E.O. Wilson (Wilson, 1984). Biophilia is described as the fundamental need to affiliate with life and life-like processes (Kahn, 1999; Kellert, 1993; Wilson, 1984). It is our human affective response to nature and natural environments, rooted in a distant genetic past (Hinds & Sparks, 2011; Wilson, 1993). Philosophically and physiologically, humans are included in "bio," we are distinct species of the great apes. We have complex social structures. Our physiology is analogous to animal physiology. Our mirror neurons evolved ancestrally within and among other species (Tramacere et al., 2017). We are mammals. Like other mammals we have hair and mammary glands to produce milk. As such, the structure of sensory biophilia recognizes this link to our place in the world.

We are most definitely not separate from nature and sensory biophilic films acknowledge this, without verbal rhetoric. The storyline follows life or life-like processes. Close-up shots of non-human organisms can "leap across centuries of evolution by taking us within the fight or flight distances that normally separate wild individuals" (Steinhart, 1998, p. 22). The approach is embodied and phenomenological, where the focus is on details of ecological engagement rather than verbal dialogue, often with a commitment to a tactile, diegetic sound. Sensory biophilia films do not require a scientific subject or a scientific rationale; rather, this is a sensory approach, an experimentation of nature's impact on our senses. It is, admittedly, an anthropomorphic consideration of other life, from within life.

In sensory biophilia, the human being is decentered and non-human elements can interact or be the focus of attention entirely separately since the larger ecosystem is central to the film narrative. However, the films of this style tend to eliminate verbal context. An example can be found in the film *Microcosmos: Le Peuple de l'Herbe* (Nuridsany & Pérennou, 1996) and its focus on the interactions of insects and invertebrates without reference to humans. The perspective is driven almost entirely by the use of the camera, as hardly any narration exists to support it. The film shows each insect in striking macro-detail, as in the scene of mating snails or an ant drinking from a drop of water. This creates closeness to these small often-unimagined beings. My film *Riverine* (Kasic, 2007) decentralized the human perspective, and instead takes the perspective of a river in spring. All shots are either at the level of the water or underneath as the water rushes along its course downstream. Both *Microcosmos* and *Riverine* are of the poetic genre (Nichols, 2017), where rhythm and form are of a priority and lack human voice as narration, interview or voiceover.

It is worth noting a focus on nature is prevalent in blue-chip wildlife films, high-budget wildlife films lacking a political, environmental, or historical context. Blue chip films mostly eliminate the presence of people and instead teach the viewer about other wildlife species (Bousé, 2000, p. 136), concentrating on behavioral sequences like predator–prey interactions and reproduction. Blue chip wildlife films do have sensory biophilic tendencies; however, the continual presence of the human voice dictating and interjecting influence over what we see is distinct from sensory biophilic films. In *Planet Earth* (Fothergill & Linfield,

2006), Attenborough's soft but assured voice tells us about wildlife. He is the quintessential voice of God narrator, and his God is the God of Science, while a dramatic storyline humanizes the animals within. "Blue chip" films have a basis in Disney films through their dramatic storyline and wildlife characters (Bousé, 2000, p. 136). Attenborough's narration provides the film with an all-knowing scientific perspective, whereas the sensory biophilic film does not incorporate such expository voice. Instead, the voice of a sensory biophilic film is that of the ecosystem, defined as "a biological system composed of all the organisms found in a particular physical environment, interacting with it and with each other" ("Ecosystem, n.," 2022). The visual imagery and wild tracks of the living and non-living beings and vocalizations of animals provide the soundscape. This is an artistic interpretation of the ecosystem into which I will delve further below when describing the calibration of the filmmaker.

There is certainly a place for the poetic, non-linguistic film style. SEL filmmaker Sniadecki argues that value should be placed on films that are rhetorically ambiguous and sensual (2014). Ethnographic films benefit from a sensory approach—they ask us to be physically and emotionally present while exploring a culture, without relying on linguistics. Similarly, sensory biophilic films sensorially resonate with the natural world and our curiosity to it, without linguistics.

Sensory vérité films are distinct from sensory ethnographic and biophilic films as they come at the subject matter from a linguistic-sensorial viewpoint. The aural and visual cinematics function poetically, emotionally, and viscerally fusing with the voice. Like the sensory ethnographic film, sensory vérité allows our senses to come into focus through haptic, synesthetic images and heightened sound design, but additionally combines that an interactive, co-creative voice of cinéma vérité and the ecological centering of sensory biophilia.

Cinéma vérité

The "vérité" term I use in sensory vérité is a return to the original sense of cinéma vérité. Today that term is used interchangeably to describe filmmaking in the tradition of 1950's observational cinema with its strict attempts to be a "fly-on-the-wall" and the twenty-first-century reality television fabricated to create the illusion of real life. Vérité here describes the style that accesses Jean Rouch's vision of cinéma vérité (Rouch & Feld, 2003), which I will refer to as Rouchian cinéma vérité. When Jean Rouch was young, he was impressed with the films of Dziga Vertov in the Soviet Union, especially *The Man with a Movie Camera* (1929). Rouch took Dziga Vertov's coinage, Kino Pravda (meaning "Cinema Truth") and put a French spin on it, calling this interactive style, cinéma vérité (Rouch & Feld, 2003). This was in opposition to the observational, direct cinema approach in the United States and Canada. Rouch did not whole-heartedly accept the positivism of early American principles of the observational "fly-on-the-wall" filmmaking:

> In these films, Rouch saw a denial of what all ethnographers are forced to learn: that realities are co-constructed and that meanings always change as contexts of interpretation change, continually revealed and modified in numerous ways. Provoking, catalyzing, questioning, and filming are simply strategies for unleashing that revealing process. Rouch insisted that the presence of the camera, like the presence of the ethnographer, stimulates, modifies, accelerates, catalyzes, opens a window . . . people respond by revealing themselves, and meanings emerge in that revelation.
>
> *(Rouch & Feld, 2003, p. 16)*

The process of filming people creates a new reality from what would have existed before. No amount of observational camera work can change that. As soon as the camera is introduced (and all the other members of the film crew), you change what reality would have been. Observation changes reality, we affect others just as they affect us (Oswald, 2014). In this way, sensory vérité films may reveal both the context of the individuals who are in front of the camera and, in some subtle or not so subtle way, those who are behind the camera and the deeper sensory elements within that shared environment. For Rouch and Feld, "filming in personal, narrative and authored styles is a choice made about the most direct and explicit way to grasp the drama of improvised life" (2003, p. 16).

Sensory vérité draws from this Rouchian understanding of films as co-creations between the filmmaker and filmed subjects. While many documentary films now focus on sound design and cinematic imagery through the auspices of high production value, what I discuss here are those films with an artistic approach that has a purpose rather than aiming to simply make the film feel "cinematic" or "slick." Rouch had a particular distaste for the "slick" film that relied primarily on technical proficiency. Slickness aside, the 1960s cinéma vérité documentary films did not have the technical ability to explore the senses as we can today with advanced digital cameras, lenses, lights, and sound equipment. Rouch therefore trained his focus more on the anthropological ritual than the sensory immersion (Escobar, 2017). Certainly, what we sense in our environment is personal and attuned to our individual ways of seeing the world; however, we can show the interaction between camera team and subject to illuminate what those on camera may be experiencing, to approximate that experience for the audience.

Sensory vérité filmmaking

Sensory vérité is a comprehensive approach to sensory exploration within an ecosystem, fusing sensory ethnography with sensory biophilia and cinéma vérité. The sensory approach allows the spectator to have agency over their viewing and layers that with context via voice and substantial dialogue. This includes the "voice" of the ecosystem alongside the voice of humans. The ecosystem voice could be in the form of ambient sound or vocalizations of organisms, while the human voice comes via improvisational dialogue, interview, and voice-over. The environment is cast as a major character alongside coexisting humans.

An ecosystem speaks through the sensory language, to which we are evolved for understanding and connecting. It is by observing the landscape that we come to comprehend it. Long takes give us the opportunity to experientially note details about the environment we might otherwise have missed. Thus, by providing a slower pace in a setting, we engage and immerse the audience in a setting. The ecosystem is prioritized as a character. The biophilic approach in sensory vérité is designed to reach our affective response to nature and natural environments through an embodied, sensorial inquiry. In this way, perhaps we reconnect with the natural world. As E.O. Wilson states: "The truth is that we never conquered the world, never understood it; we only think we have control. We do not even know why we respond a certain way to other organisms, and need them in diverse ways, so deeply" (Wilson, 1984, pp. 139–140).

While visual and aural ambience play with our senses, the human voice pulls at the imagination and cognition, igniting the senses and social communication. As evidence of our life, through our very breath comes our voice. As an auditory expression of the firing synapses of our brains, the neural pathways trigger the push of air from our lungs to the larynx, forming

speech through movements of our tongues and mouths. What we say has consequences for how another might think, as one person's neural pathways fire in response to the voice of another. Reflecting on the physical origins of voice, theorist David MacDougall contends that in a film, voices express more of the self than the face since the voice belongs to the entire body:

> Voices are more completely embodied in a film than faces, for the voice belongs to the body. Visual images of people, by contrast, result only from a reflection of light from their bodies. In a corporeal sense, then, these images are passive and secondary, whereas a voice emanates actively from within the body itself: it is a product of the body.
>
> *(1998, p. 263)*

The voice allows us to feel what is internal to another, and is more completely part of their body. A film with ambient sound and no voice is a silent thought, lacking the corporeal sense. Furthermore, voice allows for cognitive dialogue with the audience. Without the voice of people, it is an incomplete sensory exploration in an ethnographic film. It is important to note that I am not describing an expository narration that *tells* the viewer what to think as a Voice of God would. Rather, this is a personal viewpoint from a character we see on-screen that still gives agency to the viewer, to make up his or her own mind in the end.

One of the main differences between the brains of humans and the great apes is an increase in the area involved in processing auditory information. This is primarily found in the temporal lobes, in the dorsal areas related to the reception of speech and the ability to entertain rhythmic stimuli. In fact, the first musical instrument of our ancestors was the voice (Trimble & Hesdorffer, 2017). Spoken language and music evolved from an early "musi-language" originated from primate calls, emotional but without recognizable words (Mithen, 2006). Sensory vérité films use music at will, with the understanding that music is a kind of voice. The more the music can be diegetic, the better; however, having a non-diegetic sound source provides an additional sense of artistic license.

Another important aspect of sensory vérité film is the representation of time; both the passing of time itself and the scale of time. The passing of time can be depicted in many ways and as David MacDougall explains, "choices made leave huge gaps of time, space, and detail, and these become as eloquent as what is actually shown" (2006, p. 34). Some representations of time may present linearly, while others have fragmented, non-sequential ellipses, or gaps and rearrangements of time. The system of time in sensory vérité is based upon the perspectives of the characters in the film, human and non-human. Human time relates to clocks, schedules, and aging. Ecosystemic time may rely on the sunlight, playing with color and shadows of different times of day. The natural environment's auditory time can be experienced through the different sounds evident at different times of day and night. This sense of time is akin to Kant's ideas of the intuition of time (Kant, 1855) where the time of day can just be felt.

The scale of time in sensory vérité film may be altered (e.g., slow or fast motion) and this can be related to emotionality or add other dimension to perspective in a film. For example, in my film *Loose Horses* (Kasic, 2016), about horses at a livestock auction destined for slaughter, time is slowed down for effect in various moments to bring in an interior point of view of the horse. The slow motion of the horses toward the trailer serves to invite the viewer to underscore the agony of the horse and the consequences of what lies ahead, the slaughterhouse, which we never see. With expressive gaps in time, space, or detail, the sensory vérité

film finds artistic freedom through a personal sensorial experience, whether it be lingering on a scene visually for cinephilia (Sniadecki, 2014), sonically immersing the viewer in a landscape, framing up a tactile detail otherwise unnoticed, or altering scales of time to represent a personal sense of reality, as above, like the slow motion of a trauma.

The genre of poetic films develops a visual and aural rhythm and pacing (Nichols, 2017). They range from avant-garde to observational, integrating real-life existence with slow cinema and a focus on visual and aural textures. Poetic films have graced the screen since the early twentieth century beginning with the city symphony films, the ancestors of the slow cinema and observational film. City symphony films prioritized the environment—albeit a city—as the main subject. Dziga Vertov referred to the rhythm of film as "kinochestvo," stating it is "the art of organizing the necessary movements of object in space as a rhythmical artistic whole in harmony with the properties of the material and the internal rhythm of each object" (1984, p. 8). This suggests that the film should encompass not just our own perspective on an object, but also the very characteristics of the object itself. Poetic films take an avant-garde angle, lack traditional narration, and are subjectively focused without the need for objectivity. Sensory vérité films oscillate between the poetic and the vérité, the sensory ethnographic and the sensory biophilic.

A case study: the lake at the bottom of the world

A number of filmmakers work in the sensory vérité way, including those in the SEL tradition, as I have suggested previously (Kasic, 2020). Below I will focus on my film, *The Lake at the Bottom of the World* (Kasic, 2023) as a case study in sensory vérité.

The Lake at the Bottom of the World, a sensory vérité film directed by the author, is about a group of 20 scientists who embark on an expedition to discover a subglacial lake hidden 3,600 feet beneath the West Antarctic Ice Sheet. They travel hundreds of miles in a ski-equipped aircraft from the 800-person McMurdo Science Station, to the vast expanse of the deep field, where the ice meets the sky and not much else. There they set up a temporary field site and a "tent city" for the science team, filmmakers and camp support staff. They build a "Launch and Recovery" (LARS) deck where they stage the operations to hopefully find Mercer Subglacial Lake under all the ice. This is the second time in human history anyone has accessed a subglacial lake without contaminating it (Priscu et al., 2021). Just before embarking on their mission, the scientific community questioned whether there be a lake at all. Despite this, they forged on. The humans walk across the snow, shadows making their forms larger than life, alien even on a landscape we would call inhospitable, while other life finds an existence here.

In an effort to avoid using contaminates like drilling chemicals, they opted for a simple, customized drill system using a spray nozzle and 4,000 feet of garden hose, creating a 2-foot diameter hole with hot water (from melted snow) that stretches almost a mile down. Although the drill was finicky in the cold weather and parts of it broke, the drill team successfully reaches the lake. Since they cannot see the lake with their own eyes, they rely on a camera system using nearly a mile of fiber optic cable to view live imagery of the lake. A winch system connects scientific tools to capture water and sediment samples, as well as conductivity, temperature and depth data. Their goals are threefold: (1) to understand the climate history of the West Antarctic Ice Sheet to predict the future melting and collapse; (2) to discover life in the extreme subglacial environment and how it sustains itself without light; and (3) to understand how subglacial lakes fit into the nutrient cycling of the Antarctic

ecosystem. This science must be accomplished in less than a week, because the hole will quickly freeze over again. Not all goes according to plan. Hiccups ensue and instruments fail, but ultimately what shines through is the strength of their collaborative efforts. Despite the frozen environment adding to a truly grueling scientific process, the scientists succeed in all they set out to do. Like *The Great British Baking Show* (Devonshire, 2016) time is short, but they help each other when it matters most. The story is as much about their relationships with each other as it is about how the environment of the ice sheet interacts with them and their scientific tools.

In a sensory vérité documentary, the environment is deeply sensed by the human characters, and is therefore felt by the audience through the mimetic effect as described earlier. Being Antarctica, the cold is extreme, and the film shows this not only with imagery but also through ambient sound and voice. The wind blows across an endless plain of white snow, kicking up clouds of white in its journey. The scientists' breath shows as they speak to each other and to camera. The ice clings onto tents flapping in the biting wind, as the scientists struggle to walk across the exposed landscape. The sound of the wind is ever-present, a constant companion to almost everything they do. It carries itself across the snow, onto the scientists' Tyvek suits and rattling tents as people sleep. Long icicles spin attached to the winch as it transports an instrument down the hole. The hole itself is a window into another world, at first represented by a black tunnel, which then becomes cloudy blue in a spiraling passageway of watery ice. The eerie sound of the instruments scraping the sides of the hole and the unraveling mechanical winch echoes down the hole until it reaches the water, where the sound of water bubbles over, summoning the voice character of the lake.

At the ice–lake interface, the camera encounters basal ice, an otherworldly ice–bubble–sediment amalgamation. Once in the body of the lake, it is only murky water, sediment, and a rock. We cannot even see the life that exists there. Only later with a microscope are we able to see more: the bacteria colonizing the environment and the remains of diatoms in the sediment. The lake is simply not made for human eyes. The camera functions as a robot, a human surrogate, interfacing with the ecosystem in the absence of human contact. Humans are not only decentered, but non-existent in the lake. And although the scientists peek into this environment, they do so only after sterilizing all their instruments and without ever corporeally coming in contact with the lake.

Mercer Subglacial Lake is a world without human touch, without human interaction. In Werner Herzog's words, "I see only the overwhelming indifference of nature" (2005, n.p.). Sensory verité films experiment with decentering the human, focusing instead on our innate need to affiliate with non-human life, a biophilic perspective. Although the environment does not need the scientists, the scientists have gone to great lengths to attempt to understand this ecosystem. They have an intense obsession for finding life and understanding the biological processes. A decade ago, scientists thought Antarctica had a minimal contribution to Earth's nutrient cycling, however we now know nutrients from subglacial aquatic systems actually feed coastal marine environments. Antarctica must now be considered part of the Earth's biosphere with a dynamic role in the Earth system. Despite subglacial lakes being unknown to us they have an effect on our planet, and hence on us. We humans have nothing to do with this. The research itself decenters us.

The science also gives a glimpse into past climate change, showing that less than 10,000 years ago ocean waters reached under an ice shelf to where the lake is today. This does not bode well since CO_2 levels were lower at that time, implying the ice covering West Antarctica is extremely susceptible to warming temperatures, and consequently a significant rise in sea

level. Ultimately, keeping the lake ecosystem intact, as opposed to it becoming part of the ocean, rests on our ability to control the excess human production of greenhouse gases. With this knowledge, we recenter the human as culpable, responsible and a dynamic part of the Earth's system, just like the subglacial lake. Every living being has an effect on the planet. For us, in order to live on the planet in the same way we do today, we must be cognizant of the interaction of its contents: gas, solid, or liquid forms, living or non-living. This is at the heart of sensory verité, what we sense and experience is deeply entangled with the natural world in which we live.

The sense of time is adjusted in various conflicting ways in *The Lake at the Bottom of the World*. There is the time of our clocks, which the scientists seem confused by—how do you determine the time of clocks when you are near the South Pole in a place where no human normally exists? On New Year's Eve, they try to celebrate but cannot agree on when the New Year begins. Clocks and the human time system become irrelevant. One of the scientists, Brad Rosenheim, sets up a sun dial with rummaged bamboo sticks from the camp and places them on the hour according to his watch. But it isn't clear whether this includes daylight savings or which time zone he has selected, as his graduate student Ryan Venturelli gently points out. The scientists work around the "clock" as soon as the borehole is open and their science begins, further throwing out the relevance of time for sleeping or maintaining a human schedule. The sun is the leading visual time indicator, but this only goes around in circles in the sky without setting, owing to the fact that it is summer in Antarctica. Morning, afternoon, and evening are not represented as we are accustomed in a typical society. The scientists discuss large timescales of time—tens of thousands of years to millions, as they use carbon dating methods to put a historical clock on the sediment in an effort to understanding the climactic history of the lake under the ice sheet. Fragments of diatoms (single-celled algae) further link the age of the sediment and its history. Not only does the sun tell the time, but so does the sediment and the diatoms within.

Several formal components stylistically stand out in the *Lake at the Bottom of the World* as sensory vérité. On the sensory side, aspects of rhythm poetic editing, haptic visuality, and heightened sound design pepper the film. Similar to stanzas of poetry, the word poetic here refers to rhythm and pacing of the film editing and the manner in which deep ideas can coalesce between the lines and through the senses (Nichols, 2017). Sensory vérité and sensory ethnography find common ground in those poetic moments when the shot holds for longer than expected. They also have commonalities in adhering to one place, one environment, or one ecosystem for an extended period. Movement through time and space is flows like a river, it is connected and immersive in a location. The sound design is prioritized and enhanced in post-production. This is not to say it has heavy foley or stock sound, rather we record the sound on location, in the field, as it really was and bring it to a level that is both realistic and textured.

As a vérité film, *The Lake at the Bottom of the World* incorporates improvisational interview, intellectual context, co-creative filmmaker–subject interaction, and ethnographic observation. Interviews and voiceover allow the viewer to understand the context of the film. Without context through voice, the nuance of scientific discoveries would be lost and we would not hear the scientists' deeper philosophical concerns. The characters address the camera directly and involve the filmmaker as a co-creative character, like in a Rouchian cinéma vérité. However, had *The Lake at the Bottom of the World* been a pure cinéma vérité film, the heightened sensory components would not have been prioritized. Similarly, if this had been a pure sensory ethnography or sensory biophilia film, no on-camera interviews would have

occurred. And for the latter, the human figure itself would have been absent or completely de-centralized.

In understanding this style, one can think of the elements of vérité, ethnography, and biophilia as turning dials to make the film have more or less of one or the other. For example, the rhythmic poetic elements turn up the sensory biophilic side when the camera travels down the makeshift hole toward a lake that had been separated from the atmosphere for thousands of years. As the camera spins around down the hole, a voice-over imagines other worlds in the universe and how we came to be, turning up the vérité dial inviting us into the space of the mind, a poetic cinéma vérité. Back in the camera control room, the ethnography dial gets turned up as we observe the scientists watching the screen, intent on understanding the lake ecosystem they are discovering. We observe ethnographically the people, within their space, and as part of their group. By melding sensory ethnography and sensory biophilia, sensory vérité achieves an inclusive environmental ethic without speciesism, giving "voice" to nature and humans as an integrated whole.

Calibrating the mind behind the lens

The complexity and intersectionality represented within sensory vérité call for a certain poise on the part of the filmmaker. As the physical lens is focused on something, so is the depth of field of what is included in the film's sensory soup. Ideally, to be inclusive of as much sensory experience as possible calls for the filmmaker to have the widest cognitive focal length and deepest depth of field, even if they ultimately choose to dial up or down some sensory aspects. To this end, the sensory vérité film involves considerable forethought and planning, ideally including a familiarity to and careful selection of the environment(s) whose voice is "heard" in the film. This is even the case when a project is not a sensory vérité piece, as underlying filmic elements maximize impact. For example, *Earthshot: Repairing Our Planet* is a highly stylized, blue-chip, documentary series about innovative solutions to the greatest ecological challenges on our planet (Huertas et al., 2021). The series utilizes substantial expository narration from David Attenborough and Prince William as well as scripted interviews cloaked as improvisational vérité interviews; however, some aspects of the film do have sensory vérité tendencies. For my part as a director on location, I oversaw elements of the stylistic approach: the interaction of the interviewee and interviewer (cinéma vérité), the biophilia and cinematic perspective of the wildlife (i.e., the perspective of the wolf as a tracking shot in Ep 1: *Protect and Restore Nature*). My familiarity with the Yellowstone ecosystem allowed me to employ a wide integrated and sensorial approach capturing sensory biophilic elements to underlay narration provided by David Attenborough and Prince William. Ultimately, the series is not sensory vérité, but does lend itself to aspects described as earlier. Calibrating the mind toward this approach enhances other filmic styles as well.

The calibration of the sensory vérité filmmaker also requires routine immersion in ethnographic and biophilic experiences. This is an intrinsic process, one that intentionally avoids having a focused objective in mind or the camera equipment to capture the subject and ecosystem. In this way, the filmmaker can familiarize themselves and hear the multiple voices in a context which ultimately guides the scope of the sensory verité project. This allows for a kind of mindfulness while filming, perhaps a Rouchian "cine-transe," where the filmmaker is resonating with the filming. The more the filmmaker can be "within" the culture or ecosystem in the fabric of their being, the more the film will impart that to the audience. I have accomplished this in my career through immersion in cultures and environments with an

open mind to what might ultimately become a featured sensory aspect. And I have the fortune to also do this vicariously through the work of my film students by experiencing their diverse perspectives and heritages they show up with.

To conclude, sensory vérité merges haptic, tactile imagery and sound within a cinéma vérité format, providing space for a deep engagement with the film's subject, characters, and environment. Sensory vérité is akin to a layered process. First you start with the bottom layer of the character of an ecosystem interacting the ethnographic and the sensory, haptic imagery, heightened sound design, and layered with a patient observational, handheld technique of the vérité tradition. Above that, the improvisational interview is infused, occasionally lingering, percolating down to all the other layers, providing context, fodder for the mind, and the steam of the imagination. In our real lives, we constantly sense both our physical environment and whatever is living in it. In a film, what the audience sees and hears guides their journey and is encoded against a backdrop of time. We rely mostly on verbal communication to share the depth of our experience, a shorthand for depicting large scales of time and experience. In a film, the voice provides context and a depth of cognition. If the human experience is rooted in the natural world, then the ecological context and human voice is critical for representing that experience in a film devoted to a sensory exploration.

To this end, I use sensory verité to approach film as a device with the power to draw in both the senses and the intellect, informing a social conscience. For example, there is little doubt that the climate change we are facing will need a human populace with great empathy and willingness to help each other face our uncertain future. Perhaps film can be one way to help us to not just see and hear the world in front of us more deeply but to also feel it? Perhaps the broad and deep resonance elicited through a sensory vérité approach will engender greater motivation toward the positive social change we will need in the coming years?

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38
EPILOGUE
Surface tensions

Anna Harris

On the immersive promise of haptic technologies and the limits of the digital; more than one manifesto; accounts of the sensory politics of air, of city noise and of Tikka Masala; elemental reverberations of basil, beach music and sea glass from US coastal towns; vignettes about reimagining the wild and on re-sensing among spirits in the Republic of Niger; on attending to a world trying to make itself heard; chapters with questions about breakfasts; how to run again, unlearn sensory habits and see Seoul as skateboarders do; hauntings of an investigation in a Japanese graveyard; sketches of a group of friends trying on wedding dresses for a drag show; on walking, wandering, urban running and not-running; numerous autoethnographies; images of images of a subglacial lake 3,600 feet beneath Antarctic ice, thanks to microscopes and an old garden hose; more elemental musings, this time on helium balloons; fieldnotes from fishing trips in Nordic inland waters and interviews about atmospheres; a sonorous bass rumble from the Himalayas, archived scrapings of a castle door now destroyed by fire in Japan, alongside other sonic vibrations; essays on non-representational theory and affect; a biography of the afterlife of brain injury; photo essays expanding vocabularies; interviews with a Walkman; on playful teaching in a sociology classroom; material remnants of underground exploration caught in sample bottles labeled "Bush #1—gray from dolomite, depth 1,500²; fugitive anarchives of white clouds and blue sky.

So, this is (some of) sensory ethnography.

Writing

This epilogue chapter finds itself at the end of a delicious volume of sensuous texts which on the surface seem to defy their content, for how to write the sensory, and to craft the story of what is sometimes not visible, heard, or even felt? This is the exquisite paradox of the sensory ethnographer working in words, having to deal with both the limits and the excesses of storytelling (Chapter 34, this volume), of the "utter distortions" of this form (Chapter 30, this volume). As many of the accounts in this book show, the challenge of such articulation could also be considered one of the central issues of our catastrophic times. For how to chart the changing rhythms, intensities, and sensations in the air, the bone-drenching dampness of more frequent floods, the crackling smoking stinging heat of bushfires, and all

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the other gradual and not so gradual sensory changes of time in our bodies and the places in which we dwell? This challenge of articulation fuels many ethnographers in this volume, some who have guided newcomers in the field with their texts in the past, others—newer to the field—who present contributing fresh styles of questioning and prose. The paradoxes and conundrums of contemporary life have kept everyone writing. Yet now, such work is imbued with a new urgency, as the air gets thicker, and the dampness rises.

Another urgency emerges. For how, also, to wrap words around the digital, virtual, and electronic evolutions that assume increasing space in daily life, clamoring for attention and integration into altered sensoria, our "experiential envelope" (Chapter 5, this volume)? This is a situation which, according to Gottschalk (Chapter 6, this volume), is orientating toward a kind of sensory degradation due to acceleration and confusion. For others, an artificially intelligent mode of ethnography offers a different kind of generative site of enquiry. The sensorium, historically defined by some in the collection (Chapter 2, this volume) is stretched in some chapters into the more-than-digital sensorium (Chapter 25, this volume) that encompasses Go-Pro portraits by dogs, the materiality of cloud computing, and virtual reality exhibitions. It is hard to deny that digital technologies are changing how we feel the world (Chapter 12, this volume). Despite sensory ethnography often being situated as an antidote to the textually focused texts from anthropology's crisis of representation (Chapter 2, this volume), these authors show that words also remain part of their toolkit for paying attention to these changes. Sensory ethnographies trace an attunement of our capacities in these virtual worlds, acts of recognition that could not be more salient, more difficult to keep in our zones of attention.

Bille (Chapter 10, this volume) reminds us that putting the sensory into words can result in meaning getting lost, for scrambling attempts to "capture" that which "exists ambiguously." In the words of some authors in this volume, words for sensory worlds are too "imprecise and blunt" (Chapter 24, this volume), atmospheres and practices too "difficult to articulate" (Chapter 33, this volume). There will always be "a private element to sensation that can never be fully exhausted by description" (Chapter 28, this volume), something "particular, intimate, fleeting, impressionistic, and partial" (Chapter 17, this volume). Subsequently, sensory ethnography needs to also move off the page—into exhibitions about more-than-human-worlds, into workshops, creative placemaking, and community arts projects, into films made, edited, discussed, and analyzed, into soundwalks and photo essays. Alongside images, hyperlinks, and website annexes however, all ethnographers in this this volume always come back, some more cautiously than others, to develop their craft in writing, attending to what Rhys-Taylor refers to as the "soup of text." For, in the words of Bille (Chapter 10, this volume) again, "words and quotes nonetheless offer 'something'." It is useful to remember that for many in this collection, the sensorial acts more as mode of apprehension rather than knowledge acquisition (Chapter 9, this volume), shaping their work in different ways that don't always appear on the page.

As I immerse myself in these chapters, I am invited to enter this mode of questioning and unknowing, a question of unraveling the embodied sensory experiences within which I and my work has emerged (Chapter 35, this volume). First, I think of the texts many of these authors have written in the past, which I have devoured and thought with over the decades. But then, more sensorially, I am drawn to think of the wilderness that the editor of this volume has traced in sensory ethnographies of film and text, in places where I grew up, in Tasmania, Australia. Tasmanian wilderness is pictured in Vannini and Vannini's (2022a, 2022b) work through stunning images of unfurling fern foliage and odd furry animals. My own

emergence happened not in among the "wild" flora and fauna but on its edges, in a suburban home with an immaculately tended garden, where the wildness nonetheless crept in through the cackles of kookaburra calls and errant lizards with long blue tongues who occasionally got tangled in raspberry cane nets. Within this sensory emergence on the tamed edges of the bush, were sensory emergencies too; those crackling bushfires that ripped through dry eucalypts and filled our home with smoke. And then too, the more subtle but equally disturbing disappearance of Christmas beetles.

But I digress.

Elusive

Digressions happen in the unlocking of sensory memory and tend to lean toward the poetic. Making sense of one's material, as an ethnographer, involves a process of intuitive exploration and improvisation (Chapter 21, this volume). As a result, often the ethnographer, and especially the sensory ethnographer, can be considered too elusive in their texts, as they try and articulate this process. This can be seen as a fair criticism. Evocative writing may attend to writerly desires, but how much does it speak to readerly desires to engage with and learn from others' work?

Grappling with how to share stories meaningfully, in a way that makes sense of current and past concerns and speaks to audiences outside of the researcher's own context underscores the specifics of each sensory ethnographic project in this collection. This requires a different way of writing ethnography (Chapter 14, this volume). A kind of writing that thinks with creative methods, as well as those exhibitions and photographic installations and community arts projects (Chapters 7 and 36, this volume). This also means attending to affect, sensations, ambiguities and substrates (Chapters 5 and 15, this volume). The chapters and essays tread in footsteps left in wet sand by sensory ethnographers such as Lucien Castaing Taylor (Taylor, 1996) and his call for filmic ethnography, as well as the many traces that authors in this volume have left themselves in the decades previously.

Such sense-making in this book takes many forms, some more elusive than others: there is the affective essay (Chapter 15, this volume), the historical exegesis of vocabulary (Chapter 5, this volume), exercises in imagination (Chapter 26, this volume), memoir (Chapter 14, this volume) as well as more traditional academic essays. Self-sensing or autoethnography is in most of the writers' toolkits, the contingent positioning of the researcher-writer, as is a revisiting, constantly, of past encounters (responding to the editor's invitation to reflect on lessons learned (Chapter 30, this volume). The texts are crafted from remembered events, field notes, revisiting previously written texts, and unpacking the making of projects. All are infused with painstaking efforts to turn observations, feelings, and sensations into words.

Reading

Similar to "resins that coat . . . leaves and stick to . . . cows' eyelashes like mascara" (Chapter 15, this volume), one chapter's read informs the reading of others, the narratives not always aligned, at times discordant, other times tangential—haptics and tactics, anthropology of, and anthropology with. The texts thus "are not already laid out, like objects and properties on a stage, but . . . forever emergent, as folds or crumples of the flux itself" (Chapter 26, this volume). It all depends on how you, the reader, read. Ask questions of the other, Rhys-Taylor (Chapter 36, this volume) urges. To be dipped into, read as a string, strung together

differently, the chapters of such a book each bring new elements forward. They are to be threaded together by each reader, and added to with their own work and research projects. Each chapter offers a gift basket for the next sensory ethnographer to fill with their own observations and noticing.

Another way to read the chapters is to just dwell in the work, to embrace the viscous medium in which many ethnographies are written, where the forms need to be made out by the reader themselves (Chapter 26, this volume). Some sensory ethnography tries to convey not an argument or message, nor to share a narrative, but in many ways what Paterson (Chapter 5, this volume) writes of, which is auratic presence, a mode of being together that infuses doing all kinds of research, whether sensory ethnography or not.

Translation

In her essay on translating the writer Marcel Proust into English, Lydia Davis (2007) reflects on the challenge of translating the word "aurore," which arises in a description of a church interior in Combray. It is usually translated as sunrise or dawn. But she finds this unsatisfactory. Descriptions of awe-filled events related to sunlight and its glow also find their way into chapters in this book. There is "a sandstone butte with jagged streaks of red and orange rose in the golden light of late afternoon" (Chapter 14, this volume) and a dusk where "the light, already dimmed by a heavy cloud, is fading fast" (Chapter 26, this volume). Edensor describes Melbourne's sharp summer sunlight, and a bit further south, on the frozen continent "the sun is the leading visual time indicator, but this only goes around in circles in the sky without setting, owing to the fact that it is summer in Antarctica" (Chapter 37, this volume). In Canada, the "dazzling sunlight is indeed strong, however, hits and burns my skin and causes headache and the kind of sunspots on my face that my body never developed while I lived in Japan" (Chapter 29, this volume). Helium is "discovered" in the light from the sun's corona seeping out at the edges of the moon during a full eclipse (Chapter 18, this volume).

Sensory ethnography is translation, and writers in the field can learn from thoughtful translators such as Davis. She struggled with the translation of aurore into sunrise, for her the word seemed impoverished. In the end she went with "aurora," not because it had significant evocative impact in English but because it added something of its own to the text—an element of novelty and surprise, important elements of sensory ethnography that also go hand in hand with finding articulations and sharing meaning.

Surprise

Snap! A running injury (Chapter 8, this volume); Aark! The cry of a peacock (Chapter 27, this volume). A cyclist is hit by a car and lands on her head, her selfhood altered thereafter (Chapter 28, this volume). These elements of surprise also help the reflexive and habituated ethnographer break their own habits and see things anew.

Many in this volume take the exercise of seeing anew as their compass. They recount their past travels, to India or the Republic of Niger, where their sensory reorientation first takes place, in their lives as ethnographers. But we only need to see what happened during the lockdowns to see that this can happen anywhere and anytime. Though I do have to wonder whether the "arts of noticing" (Lowenhaupt Tsing, 2015) of our local surrounds—our botanical explorations of pavement specimens, the discovery of nearby streets we had

never wandered through before, the neighbors we had not spoken to previously, the newly acquired sourdough bread-making skills, and "a host of other minor sensations" (Chapter 27, this volume)—are now disintegrating in the renewed everyday outside of pandemic confines.

There are also other kinds of "sensory impacts" in this form of ethnography, to use a term that Lupton et al. (Chapter 25, this volume) take from Shanti Sumartojo, as being the kinds of affective forces that generate new knowledge. This happens not only through soft sunsets and dawn but also through toxic traces. Impact arrives with "choking black smoke" (Chapter 25, this volume), "a massive gust . . . roaring from nowhere" (Chapter 26, this volume), dusty, moldy spaces and "asthma thunderstorms" (Chapter 7, this volume), empty, lonely buildings (Chapter 9, this volume) as well as drinking, fighting, screaming (Chapter 15, this volume) and greasy, meaty breakfasts (Chapter 36, this volume). From the risky tactility of hazardous waste (Chapter 12, this volume) to the migraines, confusion, and dizziness of brain injury, sensory ethnographies are not meant to be comfortable. Fiore (Chapter 23, this volume) tackles this head on in her chapter, her ethnography hitting the reader immediately with overflowing garbage "discharging foul leachate on the asphalt," fetid organic matter in back alleys. Fiore uses this as an entry into an interrogation of the disorientating sensory qualities that arise when race and poverty are conflated with tangible manifestations of disorder and degradation.

With

The idea of attending to sensory impacts can imply a kind of sensing with others. However, Sekimoto and Brown (Chapter 4, this volume) urge readers to seek caution here. They ask:

> To what extent is it possible to feel with ethnographic research participants when the racial lines are materialized and habituated in our bodies? To what extent can a white sensory ethnographer share and participate in the sensations of race and racism on and through their white skin? In the same token, how would a sensory ethnographer feel with those who are differentially gendered, sexualized, marginalized, abled, classed, and emplaced in the worlds of social stratification and division?

Indeed, learning *with* has its limits. Charette and Elliott (Chapter 28, this volume) remind us, what this means in the context of brain injury:

> Living with an injured mind entails experiencing the world in mooded and sensorial ways that can never be fully apprehended by those who do not. Fractured memories, diluted or heightened sensitivities, and inner dialogues are hidden from others, not because they exist "inside" the body or mind, but because they resist shapes and molds of translation that we might desire to put them in, not unlike trying to fit a square inside of a circle.

Writers in this volume explore different ways of navigating the world—the skill of navigating terrains in different weather conditions, for example, which are "mundane" to non-disabled people. At the same time, they urge for a research agenda with disabled people rather than on them, with co-researchers who are "highly skillful sensualists" (Chapter 11, this volume). Sensory ethnographic methods are also used to work against simplistic reductions to disrupt

white-dominant frameworks (Chapter 34, this volume). Doing this work means working with others, whether it be neighborhood advisory committees or other community groups. It always means learning, where learning with is not assumed as a simple lesson that can be transferred.

Some write of learning with the world in a more general sense, not only as researchers. For the students of the senses, those tactile and other sensory apprentices (Chapter 12, this volume), wanting to become "accomplished sensualists" (Chapter 16, this volume). In doing so, the chapters try to pull us away from the vortexes of distraction and into more generative ways of navigating despair and delight. For those housed in educational institutions called universities and colleges, this is a collection which addresses and instructs academically a "capacity to sense" (Chapter 14, this volume), while at the same time offering a master-class in writing these experiences, the tool of the ethnographer Stoller suggests, for showing intensities in crisis.

Education

Dear sensory ethnographer, do you remember some of these texts? For me, they gradually seeped into my skin from the page, offering a sensory education of attention in prose. Here is one fragment:

> The tendencies of a daily walk in the woods become otherwise when a voice gets loud in the near distance. The contact aesthetic of swimming in a big cold lake rimmed with mountains shifts when the water surface is suddenly entirely coated with insects in a nymph phase. A groundhog knows to freeze for a long moment at the threshold of a field before making the dash to the safety of its place under the porch of a building at the far edge. The fundaments of racism show up in a scene at a hairdresser's.
>
> *(Chapter 15, this volume)*

And another:

> A splintering crack, at first hesitant, intensifies into a crash, like that of a breaking wave, shortly followed by a thud so heavy that it takes you in the pit of the stomach. The very earth seems to shake. In that moment of the tree's falling, you are as swept up in the mêlée as is the mariner whose ship is about to capsize, your entire existence borne along in the turbulence of a milieu that is simultaneously cosmic and affective.
>
> *(Chapter 26, this volume)*

Two more, from the pandemic:

> My fieldnotes recall the stifling sensation of steam drenching the mask, each inhalation gluing the drenched, burning hot fabric to my face. The eucalyptus-infused steam, I noted, was actually easier to smell from outside the sauna. One participant interviewed also described the somewhat jarring contrast they felt between stripping naked for a massage while wearing a mask. Both of us wore masks routinely and without issue in our daily lives, but here—given the rote reminder to "take a deep breath" and leave outside stressors behind—the mask was a tangible reminder that life was still far from "back to normal" (Chapter 17, this volume).

> I distinctly remember that the last taste I savored was a basil leaf in a pho, left on our front porch by a young and masked food delivery worker. The flyer for his company promised "no contact." After that liquid meal, my senses of taste and smell completely disappeared. Coffee tasted like sweet hot water, soup tasted like hot salty water, and soaps, shampoos, deodorants, toothpastes, and colognes did not smell like anything at all (Chapter 6, this volume).

"I am getting a faint taste of a basil leaf, but that's about it," Gottschalk (Chapter 6, this volume) continues. The recent past of the pandemic brought with it new, altered and lost sensations. An epilogue in fiction can take us into the immediate future of possibilities, where the characters go, wrapping up loose ends. This future has been started already by others in this volume (Chapter 7, this volume). What is the fate of the sensory ethnographers and their work in this book? The focus I have put here in my own chapter has been on the tasks of writing and reading, on this particular aspect of the "craft" of ethnography (Vannini & Vannini, 2020). But that may be a distraction too. More is also needed—images, installations, collectives, material interventions, community projects but maybe something else? For there is a lower rumbling call in this work, not to focus all our efforts on recording the world through our senses and sharing with others, but to also take time, to listen to the world making itself heard.

Noticing

Two hundred thirty pilot whales are stranded on a beach near Macquarie Harbour, a shallow fjord on the isolated west coast of Tasmania. As the helicopters hover above, film crews record and distribute the extraordinary scene through screens across the world. Meanwhile, chemotrophs slowly thrive off the rotting carcasses, generating an interconnected marine metropolis.

An autistic, gender queer comedian recounts stories of trauma and abuse in a small town, further north of this island, the very place, I realize, as I watch her popularly streamed show, where my father grew up.

Sandstone ruins lie on a gorgeous island in the island's east, where wombats wander freely among the traces of Indigenous genocide, of the Peerapper, Tommeginne, Pyenmairrener, Tyerrernotepanner, Laimairrrener, Paredareme, Toogee, and Neunonne people of Tasmania.

And south, in the shadow of the omnipresent Kunanyi mountain, in my parents' back garden, I wonder, where have the Christmas beetles gone?

In her book, *In Catastrophic Times*, the Belgian philosopher Isabelle Stengers (2015) writes that the critical question we must ask ourselves today is: "knowing what might or might not be a resource for the task of learning once again the art of paying attention." Sensory ethnographers often tread tenuously on the margins of the knowable. They learn with their material, they do not extract data from it (Chapters 9 and 30, this volume). "To get familiar with the fish" as Markuksela (Chapter 22, this volume) puts it. Vannini and Vannini (Chapter 30, this volume) describe this as attuning our attention to the possibilities of what else can be felt. Such careful listening and paying attention means hearing more about queer experiences, colonial residues and altered ecosystems of places that seemed familiar. For Charette and Elliott (Chapter 28, this volume), sensory ethnography also offers the

chance to convey, palpably, what it means to no longer feel like oneself, perhaps a vital tool for navigating our changing worlds. Their interview questions could act as our guide:

Where do you make your home today?
How is the weather?
What it is like to feel the world differently, to feel changed?

Despite writing this piece in Europe, my experience of the place where my sensing emerged, Tasmania, is one of solastalgia, a word that describes the yearning for what has changed due to the climate catastrophe. I sense this still, as a migrant, despite my distance from the eucalypts. When I travel back to where my parents still live, I experience both this acute homesickness for a past environment and also an awe for new ruptures and the unexpected (Chapter 30, this volume) that I find in my more tourist-like state, like the iridescent blue and yellow caps of fungal networks I find peeping from damp soil in a shadowy fern glade.

There is an invitation from the authors in this book for you, the reader, to plunge into the depths of sensory experience (Ingold), to spend time in and reimagine this changing world so as to provoke, intervene, and disrupt the current regime of sensibility (Chapter 27, this volume). All has not been said on the subject, nor can it ever be. The writers beckon their readers to seek out unfamiliar spaces to reinvigorate a sensory engagement (Chapter 27, this volume) with our seductively demanding, yet forever escaping world (Chapter 30, this volume). They gently coax, with their attention to craft, to write in a way that resembles objects of study. This is not a question of training mastery (Singh, 2018) but rather a gentler art of noticing (Lowenhaupt Tsing, 2015). It is desire to dwell in the textures and details of the mess, and with the caretakers of its instability (Chapter 21, this volume). Thus, sensory ethnography moves beyond methodology, theory, and its various multimodal forms of research expression. It becomes this all and something more, concerning how to enliven modes of thinking generatively, inventively, and sensually about how to navigate everyday life. It is about taking it all in, whether directly or in a sideward glance. It is about listening to others and to the world, noticing minutiae and the "artful practices" (Hockey and Allen-Collinson) that, if we pay enough attention, become the smallest fractals of something larger.

And always, in the process, skating the surfaces of what can ever be articulated in words.

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